

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

COTTON MANUFACTURING.

The cotton manufacturing industry of the Southern States is made the special feature of our issue of this week. We present a number of interesting articles dealing with various phases of this great industry, and we also print a complete list of the Southern cotton mills. This list we have prepared from returns received from the mills, and it has been carefully revised. The statistical matter in this issue is alone worthy of preservation for future reference.

THE BUSINESS OUTLOOK.

Of particular interest at this time are the views of leading business men upon the outlook in the South, which we publish in this issue. We have selected from among many hundred letters those which speak of the cotton manufacturing States—the Carolinas and Georgia.

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VOL. XXII.
No. 18.

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Baltimore, December 2, 1892.



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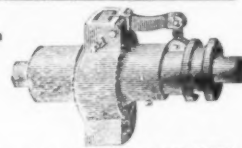
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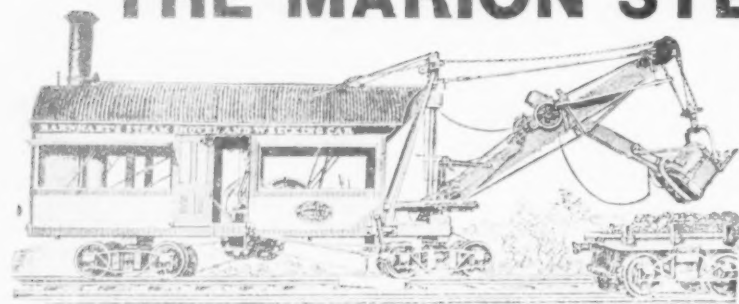
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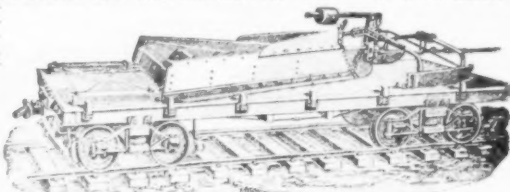


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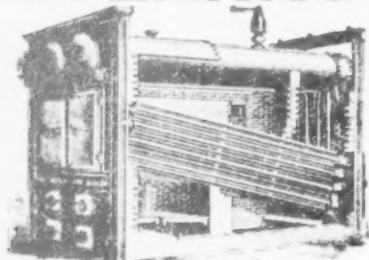
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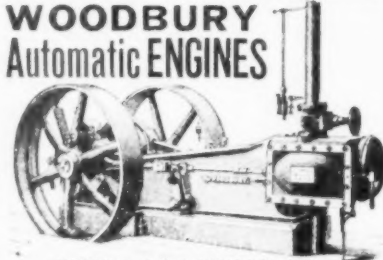
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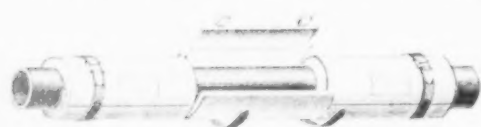
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Crandall Packing Co., Palmyra, N. Y.
Forest Sil. Bronze Pack. Co., New York, N. Y.
James Smith Woolen Mch. Co., Philadelphia, Pa.
Jenkins Bros., New York, N. Y.
H. W. Johns Mfg. Co., New York, N. Y.

Paint.

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Virginia Paint Co., Goshen, Va.
A. Rasch & Son, St. Louis, Mo.
Texas Coal Tar & Asphaltum Co., Dallas, Tex.
H. W. Johns Mfg. Co., New York, N. Y.
Canton Steel Roofing Co., Canton, Ohio.
Joseph Dixon Crucible Co., Jersey City, N. J.

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Thompson & Campbell, Philadelphia, Pa.
W. D. Dunning, Syracuse, N. Y.

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Holyoke Stm. Boiler & Pn Wks., Holyoke, Mass.

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Du Bois & Du Bois, Washington, D. C.
Donaldson & Co., Washington, D. C.
George E. Lemon, Washington, D. C.
Glasecock & Co., Washington, D. C.
Champion & Champion, Washington, D. C.

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Alford & McCarthy, Chattanooga, Tenn.

Perforated Metal.

Harrington & King Perfor. Co., Chicago, Ill.

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Paul S. Reeves, Philadelphia, Pa.
Crown Smelting Co., Chester, Pa.
Phosphor-Bronze Smelt. Co., Philadelphia, Pa.

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Radford Pipe & Foundry Co., Cincinnati, O.
Howard-Harrison Iron Co., Bessemer, Ala.
John Simmons Co., New York, N. Y.
The Glamorgan Co., Lynchburg, Va.
Wells Rustless Iron Co., Little Ferry, N. J.
Chattanooga Fdy. & P.Wks., Chattanooga, Tenn.

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Henry Stevens's Sons, Macon, Ga.

Pipe. (Wood.)

A. Wyckoff & Son, Elmira, N. Y.

Pipe. (Wrought Iron.)

Oil Well Supply Co., Pittsburg and New York.

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Delbert Engineer'g Co., Ltd., New Orleans, La.
H. F. Watson Co., Erie, Pa.
H. W. Johns Mfg. Co., New York, N. Y.
A. Wyckoff & Son, Elmira, N. Y.

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Lone Star Plaster Co., Quanah, Texas.

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Charles Lead Co., Charleston, S. C.
Brown & King Supply Co., Atlanta, Ga.
H. Mueller Mfg. Co., Decatur, Ill.
John Simmons Co., New York, N. Y.
West & Branch, Richmond, Va.
Haines, Jones & Cadbury Co., Philadelphia, Pa.
Pancoast & Maule, Philadelphia, Pa.
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Cardwell Machine Co., Richmond, Va.
H. Dudley Coleman Mch. Co., Ltd., New Orleans.
Boomer & Boschert Press Co., Syracuse, N. Y.
Valk & Murdoch Iron Works, Charleston, S. C.

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Philadelphia Eng. Works, Ltd., Philadelphia, Pa.
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McKaig I. & S. Shaft. Wks., Cumberland, Md.
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Deming Co., Salem, O.
U. S. Wind Engine & Pump Co., Batavia, Ill.

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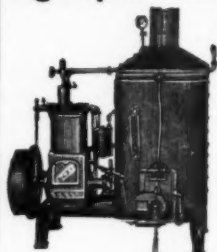
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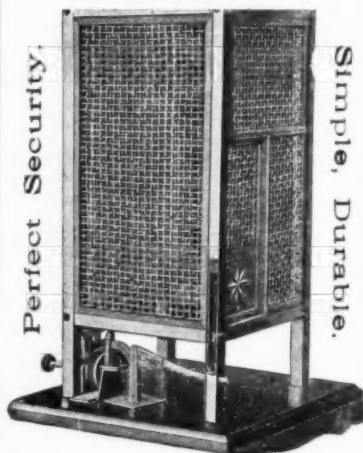
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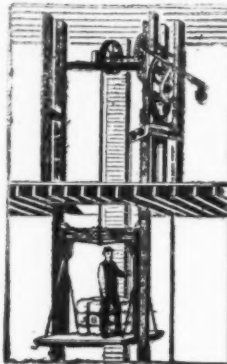
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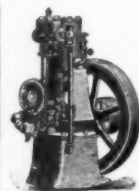


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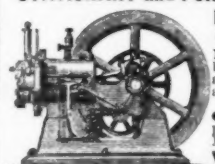
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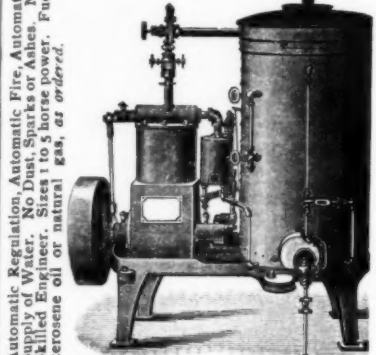
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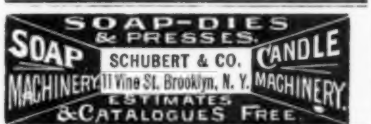
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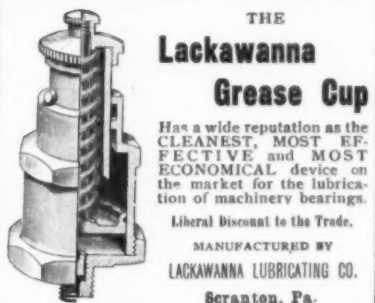
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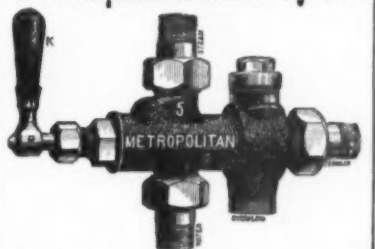
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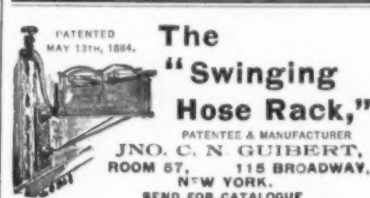
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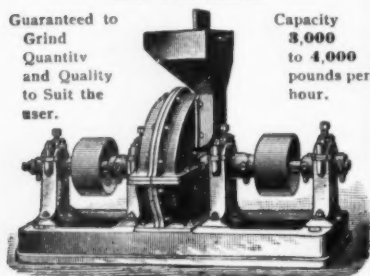
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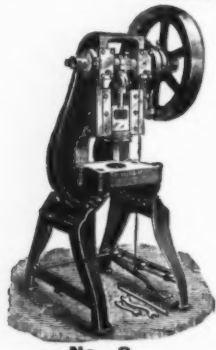
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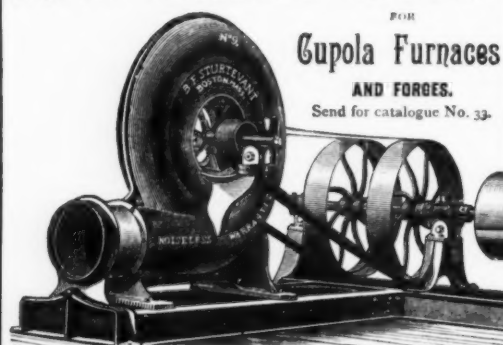
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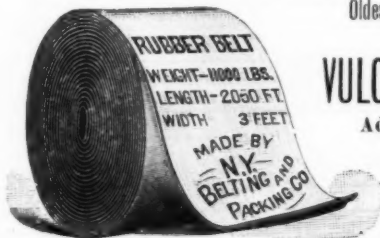
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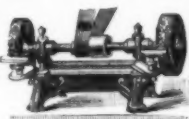
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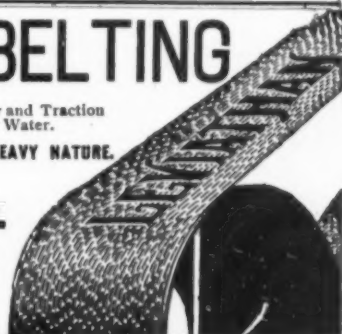
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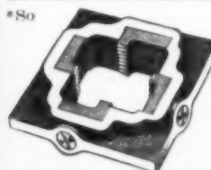
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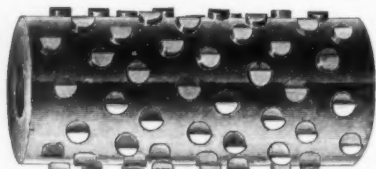
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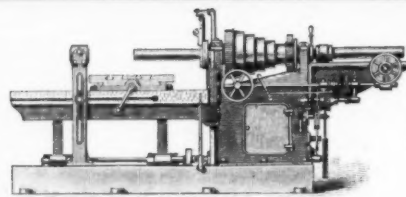
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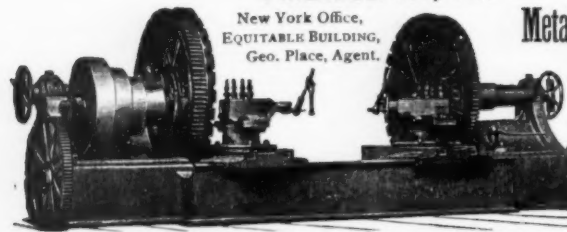
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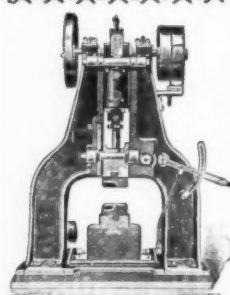
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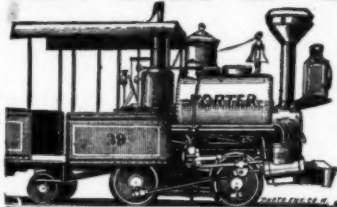
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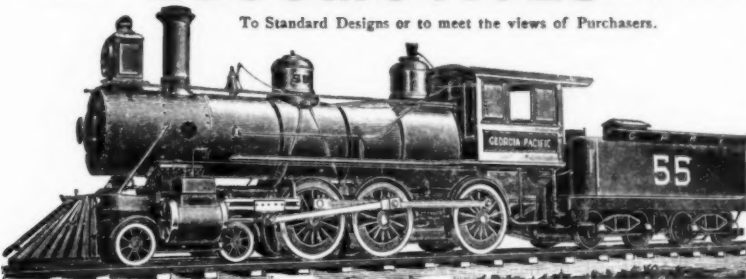


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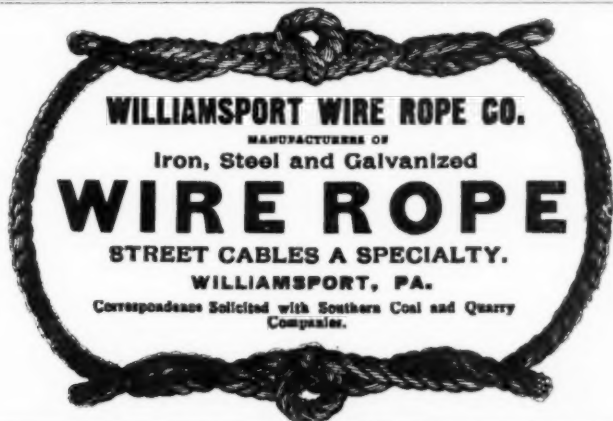
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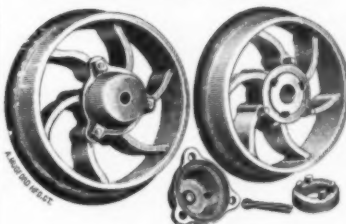
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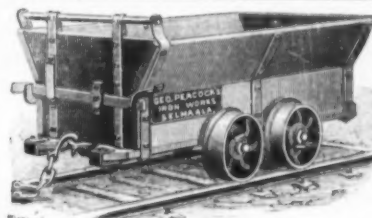
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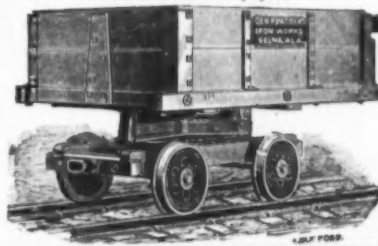
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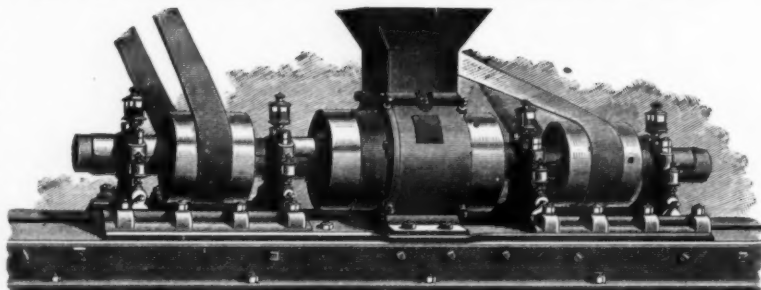
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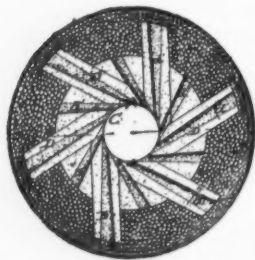
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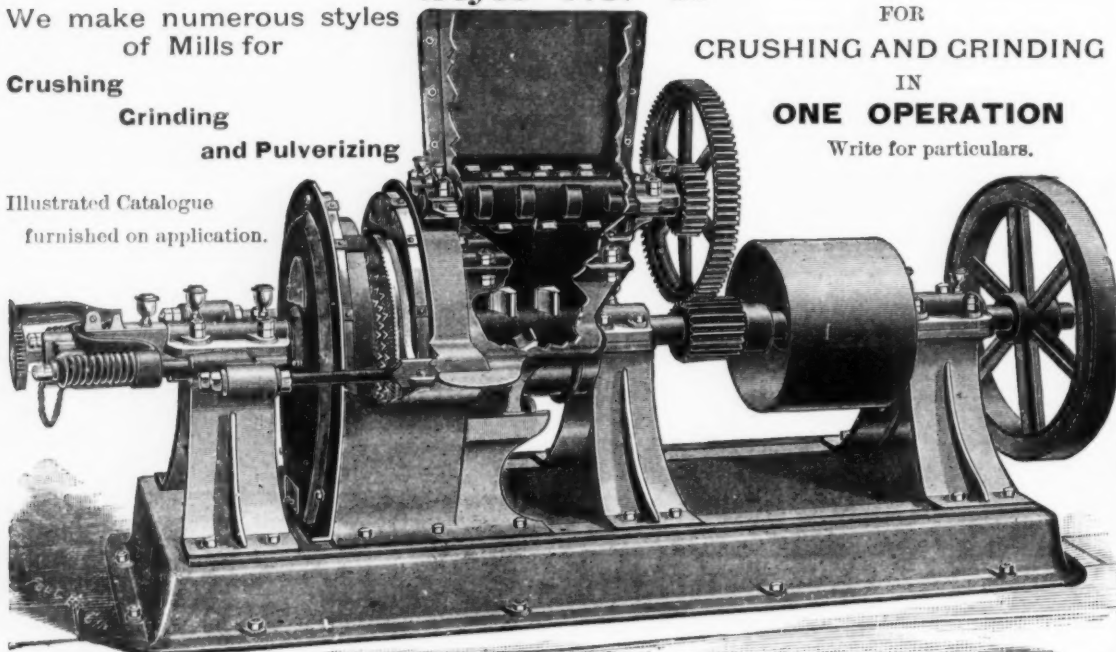
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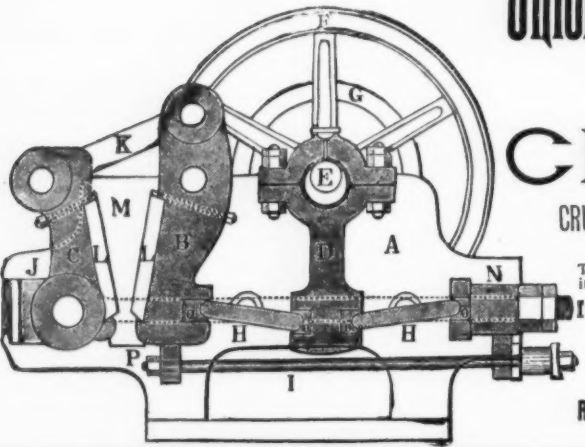
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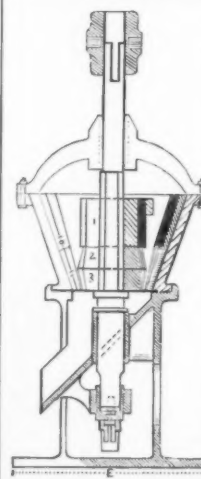
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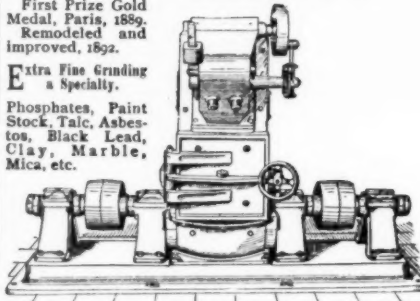
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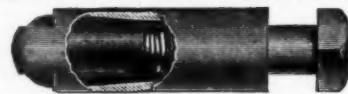
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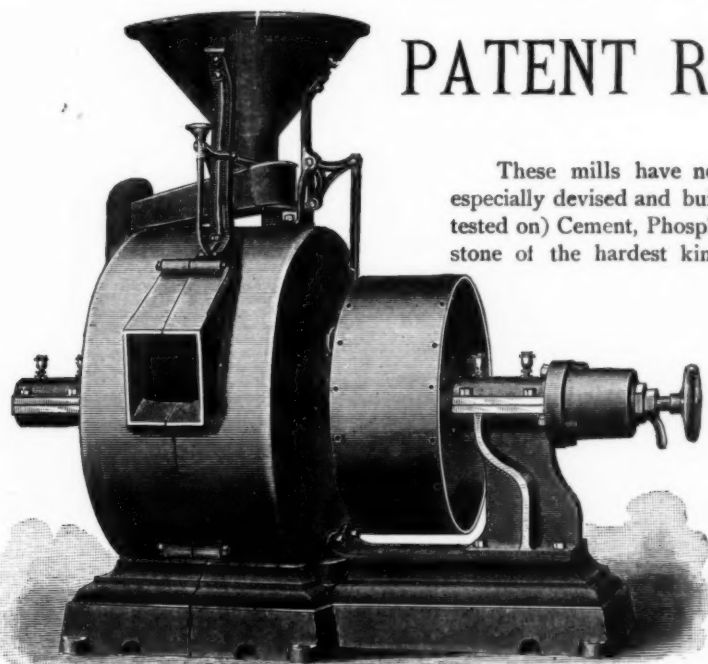
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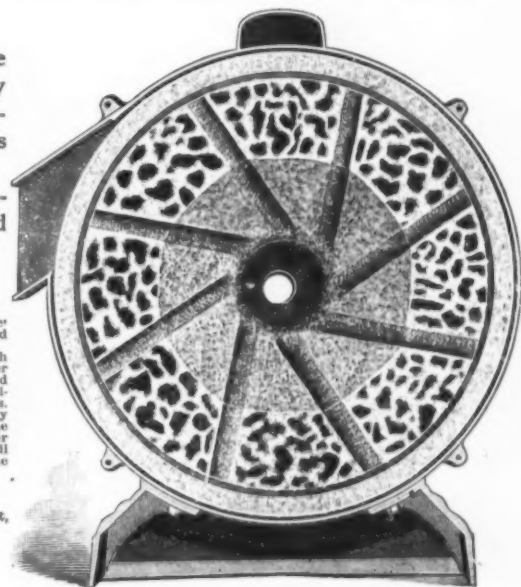


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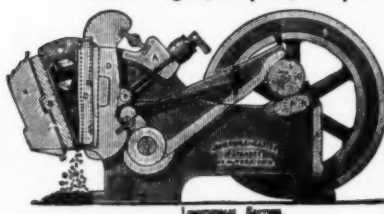
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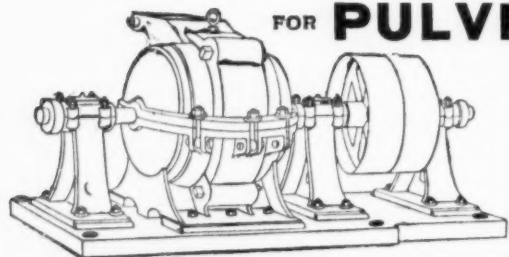
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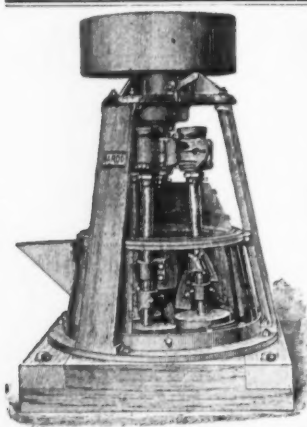
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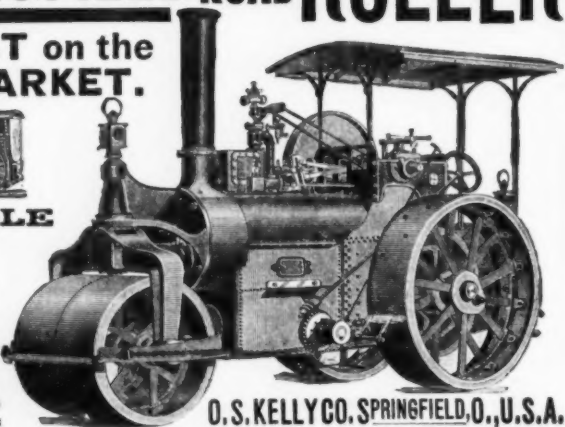
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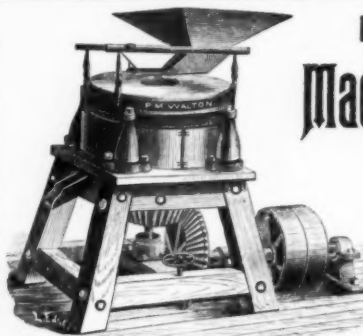


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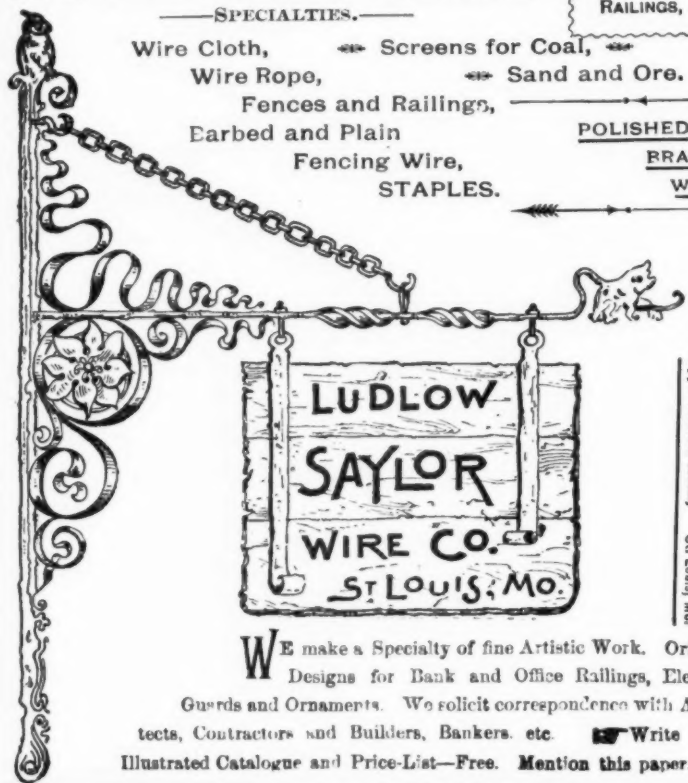
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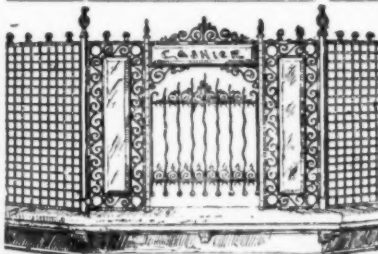
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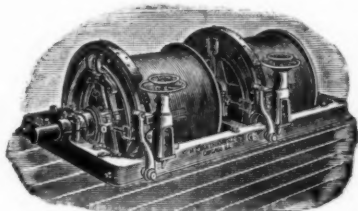
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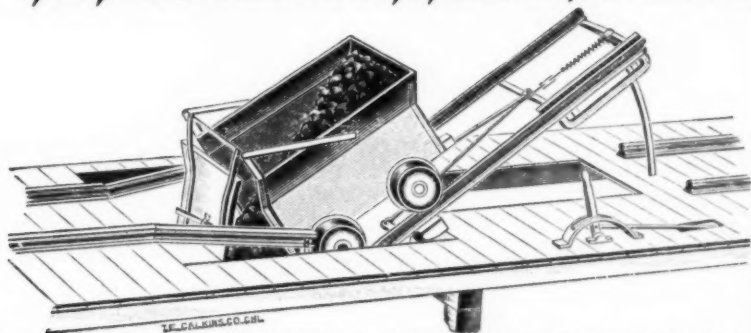
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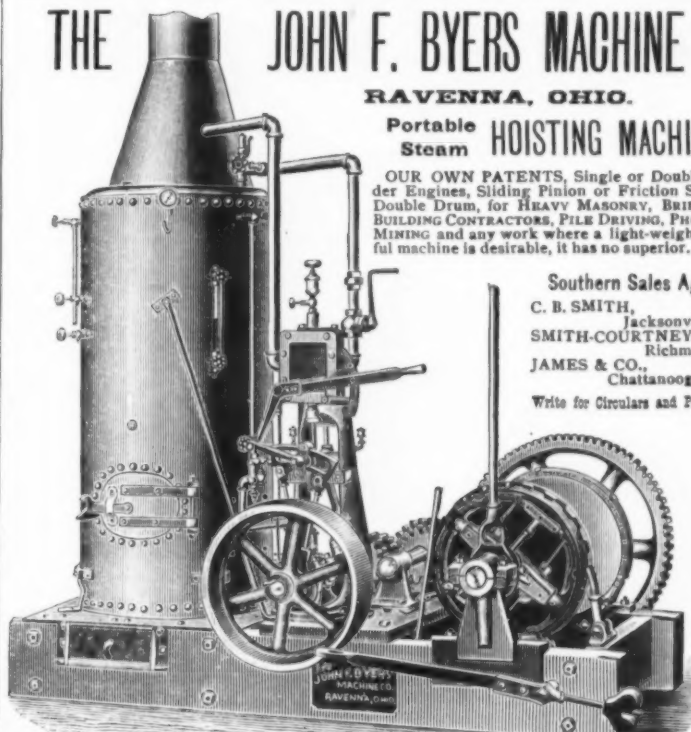
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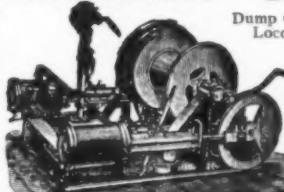
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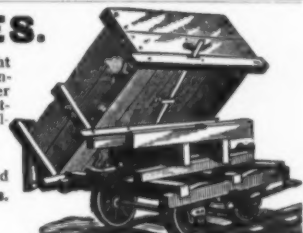


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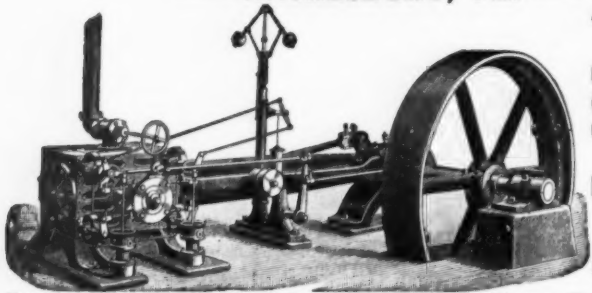
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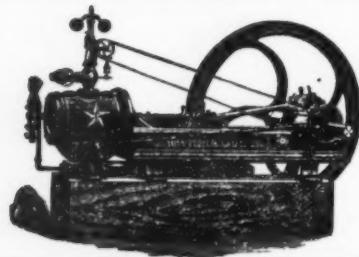
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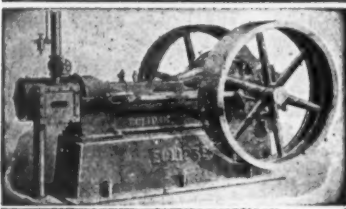
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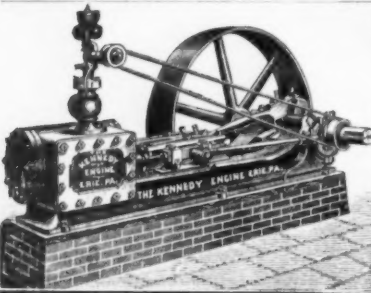
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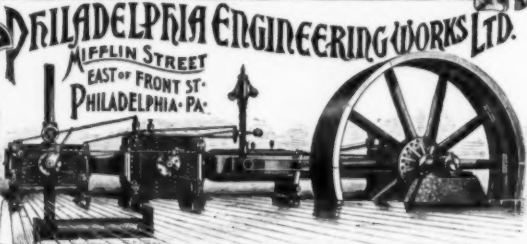
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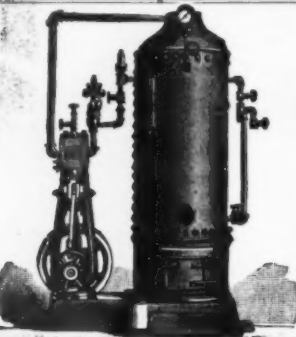
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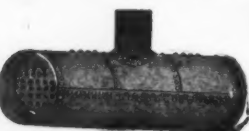


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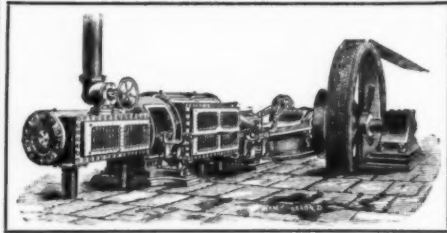
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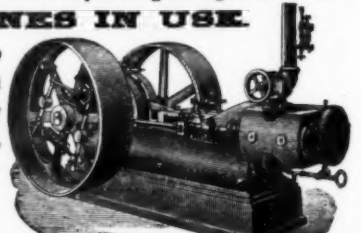
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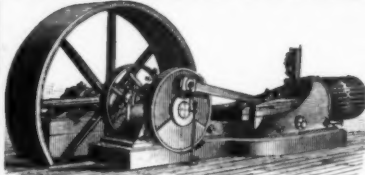
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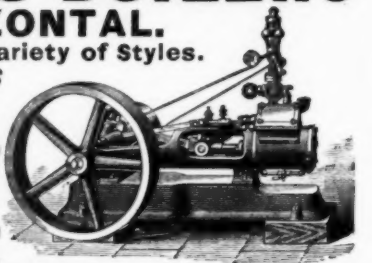
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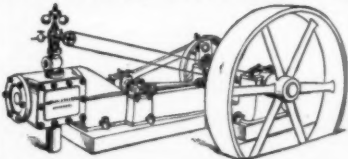
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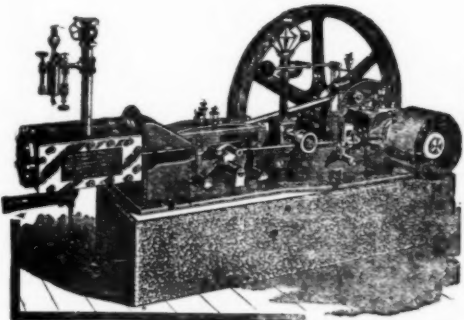
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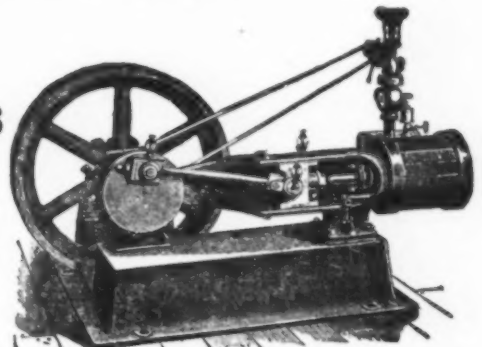
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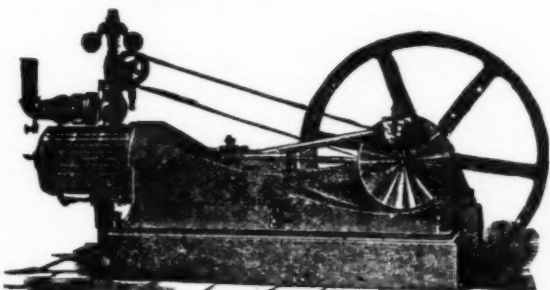
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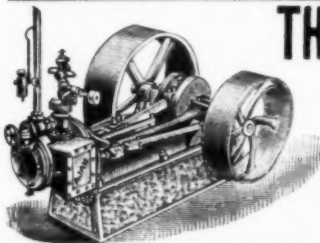


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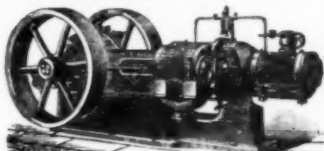
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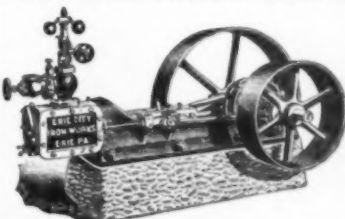
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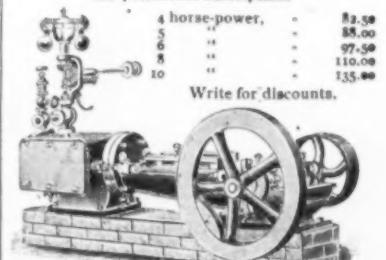
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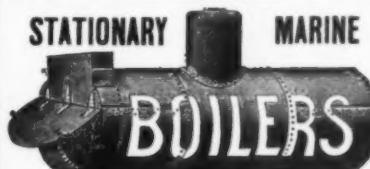
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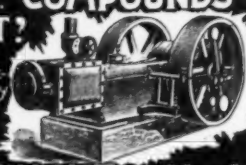
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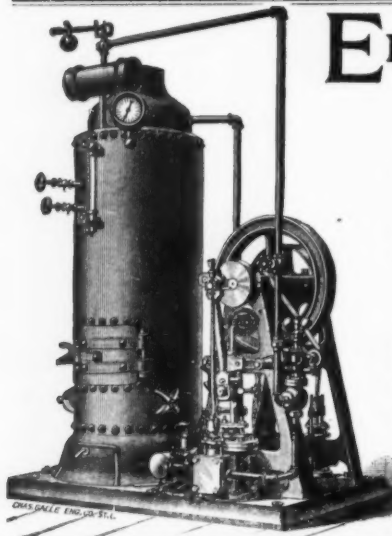
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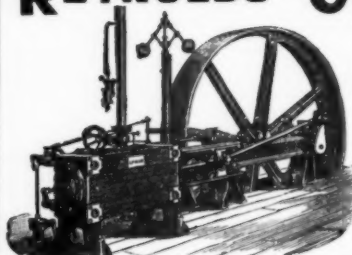
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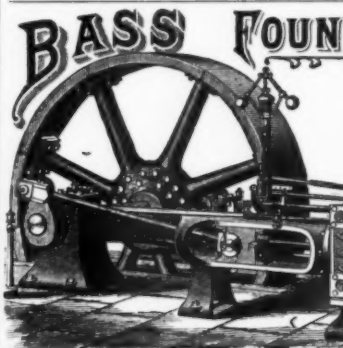
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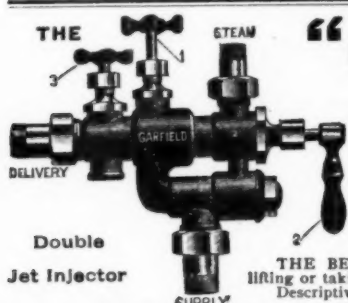
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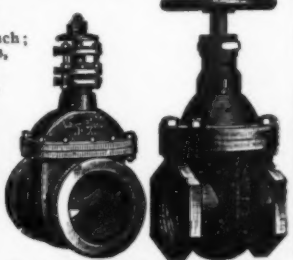
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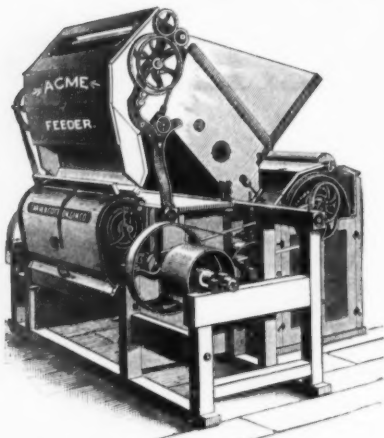
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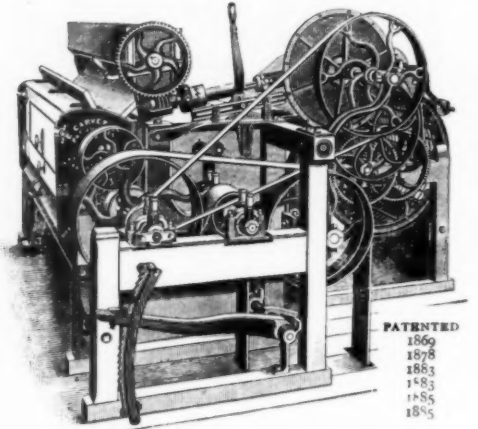
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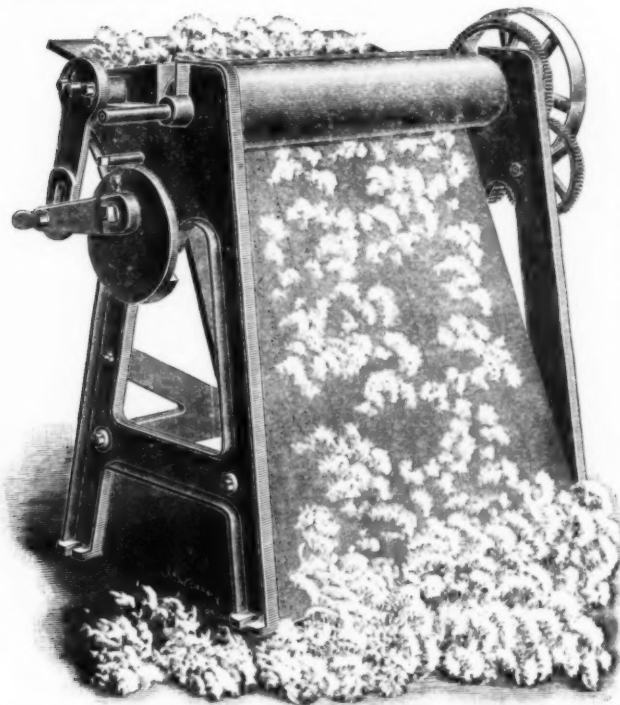
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OF THE

NATIONAL COTTON GIN.



MR. A. W. MANN Boston, Mass.

MY DEAR SIR—As a resident of South Carolina and a cotton grower on two hundred acres of upland in that State, I desire to add my testimony to that of other Southern men who have examined the process of ginning cotton by the National Cotton Gin, and would say that if my crop of 1891 could have been ginned by one of your machines it would sell for three cents per pound more than it will bring ginned by the saw gin. Your gin is so simple and handles the fibre so nicely, it must have a large sale at the South as soon as its merits are generally known, and in future I hope to have my cotton ginned by it. Respectfully,

R. G. HOLMES.

HOLYOKE, August 18th, 1892.

DEAR SIR Having seen the ginning of cotton by the National Cotton Gin, I desire to say after critical examining the staple as it comes from your gin, that the work is perfect, not a fibre being broken or injured. After over fifty years' experience in manufacturing cotton, and being fully conversant with the work of the saw gin, I see nothing to prevent the National Cotton Gin being universally used. Wishing you and your company complete success, I am Yours,

JONES L. DAVIS.

Mr. Davis was formerly Agent of Lyman Mills, Holyoke; Enterprise Mills, and Sibley Mills, of Augusta, and Atlanta Mills, Ga. All the Georgia Mills were built and run under Mr. Davis' superintendence.

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Runs with light power. Is easily kept in repair. Takes the fibre clean from the seed and makes no dust. Will not crack seed or injure in the least the most delicate fibre. Will gin the short or long staple upland, or the Sea Island, Peruvian, Egyptian and East India Cottons. Requires no condenser, and saves greatly in gin falls and waste. Will clean oil-mill screenings. The danger of personal injury to the operator of the other gins is entirely obviated where the National Gin is used.

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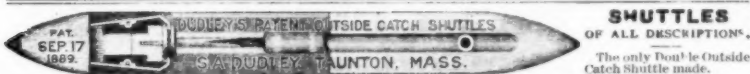
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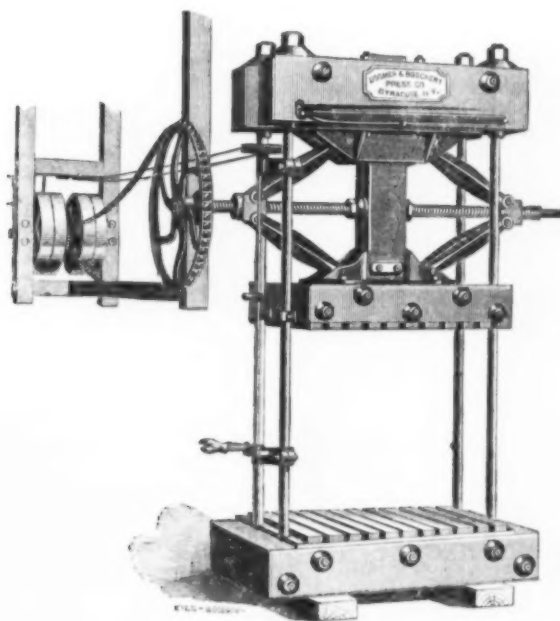
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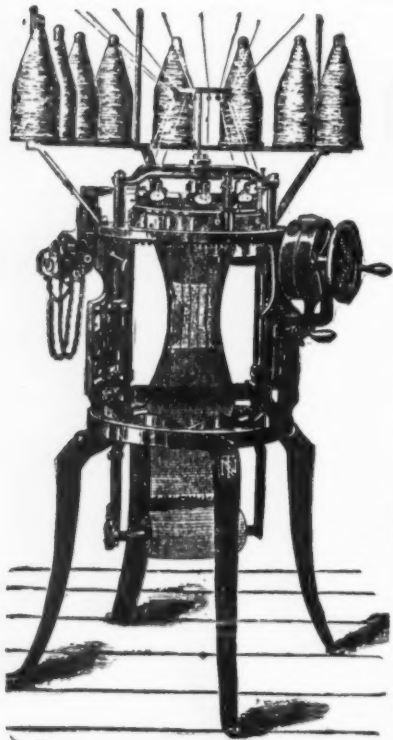
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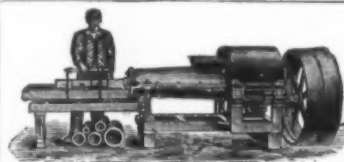
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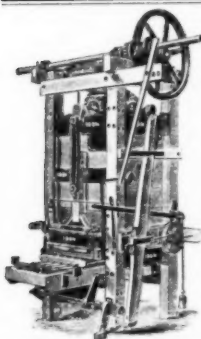
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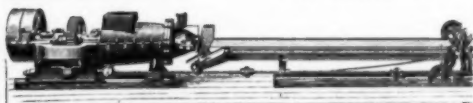
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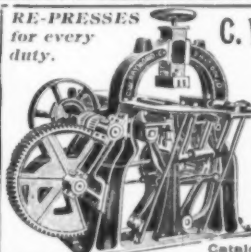
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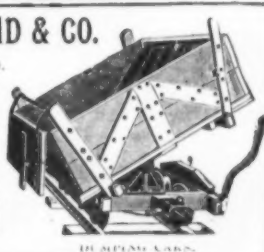
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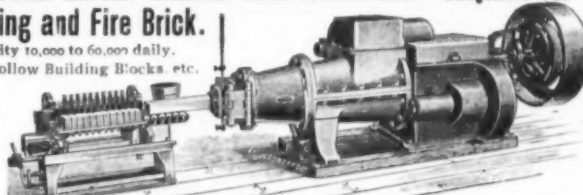
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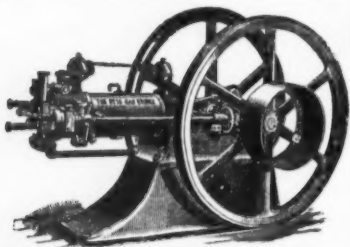
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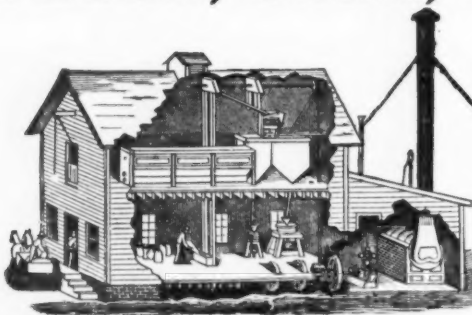
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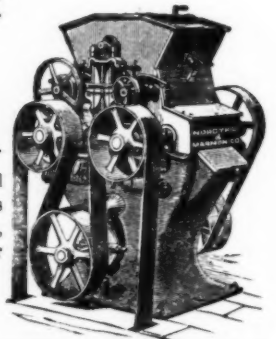


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The Production and Manufacture of Cotton in the South.

By D. A. Tompkins.

Food, clothing and shelter—these three are the prime needs of the human race.

The soil of the Southern States is capable of producing, in cotton, the raw materials for clothing to supply the entire human race. Cotton clothing for some climates, for at least part of the year, would not be sufficient, but for many parts of the earth it would be sufficient all the year round, and for the remaining parts it would be sufficient for the greater part of the year.

The achievement of having developed the culture of cotton to the extent to demonstrate that in the South alone cotton enough may be produced to clothe the people of the world exhibits a wonderful capability of Southern soil and Southern people. Cotton has been produced in many countries and for centuries in the past, but it has never, within the knowledge of man, occupied so important a place in relation to the affairs of the human race as now. This condition could never have been attained except by an intelligent and a progressive people.

Before the civil war little effort was made by these people to manufacture as well as produce cotton. As soon after the war as the political conditions would admit new ventures in business the manufacture of cotton was begun, and has steadily increased until at the present time the percentage of its increase in the South far exceeds that of New England.

The unfavorable condition existing before the civil war was the institution of slavery. That being removed, most of the conditions at the South are more favorable to the manufacture of cotton than those of any other part of the world, viz.:

1. The freight charges on raw material to other points are saved.
2. Profits of dealers in cotton are eliminated.
3. Labor is cheaper than in other parts of the United States.
4. Living is cheaper than in other parts of the United States.
5. The cost of bagging and ties is almost entirely saved by selling these back to the farmer and thus using them over and over until worn out.
6. Saving in cotton lost in transportation in going to other points.

Since the beginning of the new development of cotton manufacture in the South the results justify the statement that cotton goods can be produced cheaper in the southern part of the United States than in any other part of the world. Many of the new factories in the South have made larger profits than New England or English mills, notwithstanding that time has not yet elapsed for Southern managers and operatives to acquire that degree of skill and knowledge that it is fair to assume will come with increased experience.

In the development of cotton manufacture in the South finer goods are constantly produced with commercial success. Several years ago coarse plaids were the principal colored goods produced in the section about Charlotte, N. C., but within the last few years quite a number of mills have been built that are now making gingham and are running with quite as much suc-

cess as the mills running on coarser goods.

The success so far attained is sufficient to warrant the belief that, as knowledge and skill in manufacture increase, still finer goods will be produced, until at no very distant day the skill at the South will equal that of the other manufacturing centres, and then all classes of cotton goods may be made cheaper than elsewhere.

The prospect of attaining to this condition holds open to the South the promise of a future prosperity that it is difficult to estimate. The greatest ultimate prosperity will come to the South by two means, viz.:

1. The production of cotton cheaper than it can be produced in any other country.
2. By the manufacture of cotton goods cheaper than other sections or countries can manufacture them.

The first must be accomplished by improved methods of agriculture and improved methods and appliances for the preparation of cotton for the market. The agricultural methods in the South, while not as improved as those of the wheat-growers of the Northwest, are far more improved than the methods of any other cotton-growing country. The use and manufacture of commercial fertilizers in the South has become enormous. In the South Atlantic cotton-growing States almost every town has sulphuric acid chambers and chemical works for the production of commercial fertilizers, and in some of the larger Southern cities a number of these works exist, and the capital employed will go into the millions, and almost every cotton-growing State has in operation or is preparing to establish an agricultural college. The methods and appliances for ginning and baling cotton have been completely revolutionized since the abolition of slavery, steam having been substituted for horse-power and mechanical appliances for what formerly required manual labor.

The best prosperity of the cotton-producing part of the United States lies not in the direction of causing cotton to be high-priced, but rather in the direction of the production of cotton so cheap and in such large quantities that the competition of Brazil, Egypt and India would be destroyed. The chief item of cost in producing cotton now is in picking. What the South wants is not small crops and high prices, but the knowledge, skill and appliances to produce large crops at low prices, but yet at a fair profit.

The tendency is all in the direction of accomplishing this. The production of fertilizers is constantly increasing, while the price decreases. Appliances for ginning and baling cotton are being constantly improved, while they are made and sold at less cost. With a good cotton-picker the South could produce 12,000,000 to 15,000,000 bales of cotton, and make as much per pound at five to six cents per pound as it now makes on its 7,000,000 to 9,000,000 bales at seven to ten cents per pound.

Having before it the prospect and the probability of supplying the bulk of the cotton for the world, and being well situated in all respects for the manufacture of cotton, it behooves the Southern States to give every encouragement possible to the production of finished cotton products. We can already produce cotton in large

quantities cheaper than any other part of the world. If we can also manufacture it cheaper into merchantable goods, then the future prosperity of the South, founded alone on the production and manufacture of cotton, ought to be as great as any people ought to wish for.

In the Piedmont region of North and South Carolina and in Middle Georgia the manufacture of cotton has developed to important proportions, and investments in the mills have been uniformly satisfactory to the investors. In these sections the development is already sufficient to determine that cotton manufacture is already established not only as a permanent institution, but on a competitive basis as to the other sections of the world. Its further growth is simply a matter of accumulating capital and the acquisition of more widespread knowledge and skill, and these are constantly increasing.

Charlotte, N. C.

Cotton Manufacturing in the South: Its Past, Present and Future.

By Henry G. Kittredge.

The subject of cotton manufacturing in the Southern States has been discussed in its various phases for the last two generations without any seeming abatement of interest in its future. Notwithstanding the ever-recurring prediction that success cannot attend the manufacture of cotton in the South, facts seem to show to the contrary whenever proper business intelligence is used in shaping its course. Whether cotton manufacturing in the South will ever attain the progressive level of that in the Northern States is quite another question, attended by perplexities that only time and actual experience can solve. From present appearances the manufacture of cotton in the South and in the North will occupy at all times two distinct spheres in the character of their products, each acting upon the other in the way of mutual improvement.

In 1849 Mr. A. A. Lawrence, of Boston, wrote several communications to the leading journals of that time, contending that it was impossible for the South to compete successfully with the North in the manufacture of cotton. He viewed the labor and pecuniary situation at the South as it then existed, and apparently gave no consideration to the possibility or even probability of a subsequent change which would elevate labor conditions and the financial circumstances of the people. His line of argument was the same as that now very largely indulged in, of there being no skilled labor for factories and the impossibility of securing it from the local population. The lack of water-power was also dwelt upon by him, and steam-power he rightly regarded as too costly, forming his opinion from his experience and observation in New England, where water was depended upon for power, the efficiency of steam-power not having been brought to its present high state of economy.

In a somewhat different strain Gen. C. T. James, a civil engineer of Rhode Island, who was frequently consulted regarding the erection of cotton factories in the South, and was therefore presumably familiar with the adaptability of that section to cotton manufacturing, wrote to the editor of *Hunt's Magazine* in 1849 that the

"Southern cotton States have all the facilities for cotton manufacturing except, perhaps, skill. However, the cotton-growing States should be the great seat of cotton manufacturing in the Union." While the South's industrial position was thus being debated, the amount of capital invested in cotton factories in the Southern States east of the Mississippi was nearly as much as that similarly invested in Rhode Island, and over 50 per cent. more cotton was consumed.

The conclusions concerning the future status of Southern cotton manufacturing have almost invariably been reached by a false course of reasoning, predicated on things that are curable, as insufficiency of capital, want of skill in labor, imperfect mill construction and inadequate machinery, instead of on those things that are irremediable, as the influence of climate upon the physical energies of the operatives. I believe that there is nothing insurmountable in the progress of the cotton manufacturing industry in the South to an equality with that attainable in any other portions of the United States, except the enervating effect of the climate upon the physical, if not the mental, efficiency of the operatives. I believe it is simply a waste of time to dwell upon anything else than the debilitating effect of the high temperature and long-continued warm season in the South when considering the future status of the Southern cotton manufacturing industry. Everything else can be corrected by man, but climatic influences upon the human system cannot be, and it is in these that good reasons can be found for predicting better pecuniary results for a series of years from manufacturing operations in the North than in the South—that is, wherever labor efficiency or endurance is a factor of prime importance as it is considered to-day.

Leading manufacturers in the South recognize this relative advantage of the North, and they have so testified in published letters. This was noted in 1840 by James Montgomery, an observing cotton manufacturer, whose sayings are often quoted. "The uncongenial nature of the Southern climate," he once said, "renders it a matter of doubt to many whether the South will ever outrival the North in the manufacture of cotton." In studying the sanitary conditions of the Northern and Southern soldiery in the late war, it was a matter of frequent observation, thought worthy of record, that the Northern soldier endured the hardships of army operations much better than his Southern opponent. This was attributed very largely to the enervating effect upon the latter of many years' residence in the warm climate of the South. What effects the soldier in the camp, effects the operative in the factory. There is more determination, more persistency, in the man of the North than in the man of the South. "Man's purest and most perfect type," remarked J. Disturnell in a lecture before the American Geographical and Statistical Society, "is found in the centre of the temperate climates, and, since he has to acquire the full possession and mastery of his faculties by toil and by the exercise of his energies, no other climate could so well minister to his progress in this work. An excessive heat enfeebles man, inviting to repose and inactivity." The centre of the temperate

climate lies north of the Gulf and Southern Atlantic States, which in Europe is north of Spain and Italy. The South is in the same isothermal zone with Southern Spain, Southern Italy, Greece and Southern Turkey in Asia.

Mr. J. F. Hanson, the well-known treasurer of the Bibb Manufacturing Co., Macon, Ga., observed not long since, at one of the meetings of the New England Cotton Manufacturers' Association, "that by reason of the longer duration of the heated term in the South, the labor of that region does not possess the degree of vitality common to the labor of New England, and if anything is gained from the milder winter climate, it is lost through the heated term." It is my opinion that there is nothing seriously obstructive to Southern growth and proficiency in the manufacture of cotton aside from the effect which the climate has upon the vitality of the people, which I regard to be sufficiently momentous and insuperable as to place the North permanently in advance of the South in all factory operations any way dependent upon the physical energy of those engaged in them. The disadvantage of undisciplined labor, inferior, even superannuated, and poorly proportioned machinery, in the South, need not be other than temporary, and improvement in these respects is being constantly noted. Neither do I consider the advantages, often referred to as favorable to the South, of lower cost of raw material, cheaper power and lower cost of labor, as of any permanent consequence, or which cannot be offset by things unfavorable. The most propitious region for the establishment of the cotton manufacturing industry of the South is that coming within the limits of the Appalachian mountain system, where the climate partakes of characteristics more or less resembling those of the Northern States. Its chief development will continue to be there.

At a meeting of cotton manufacturers, held in Augusta, November, 1891, Mr. J. F. Hanson remarked that "in less than ten years the South's percentage of the total manufacturing will be less than it is now. How many mills can get par to-day for their stock?" Percentages are quite as often to be misleading as otherwise, and their use requires great circumspection. In this particular, however, the results of the next decade will probably show Mr. Hanson in the right, but we regard the tenor of his remarks as more pessimistic than facts will warrant. There are a number of cotton mills in the South the market value of whose stock will compare favorably with that of some New England mills which are recognized to be in a prosperous condition. For instance, compare the last reported sales of shares of the following Southern and Northern mills, the par value of which is \$100:

	South.	North.
J. P. King Mfg. Co., Augusta.....	102	....
Rich. Borden Mfg. Co., Fall River.....	....	106
Eufaula Cotton Mills, Eufaula.....	114	....
Osborn Mills, Fall River.....	....	114
Wamsutta Mills, New Bedford.....	....	116
Naumkeag St. Cotton Co., Salem.....	....	112
Piedmont Mfg. Co., Piedmont.....	130	....
Tremont & Suffolk Mills, Lowell.....	....	131
Graniteville Mfg. Co., Graniteville.....	148	....
Bates Mfg. Co., Lewiston.....	....	149
Amory Mfg. Co., Manchester.....	....	138
Clifton Mfg. Co., Clifton.....	152	....
Androscooggin Mills, Lewiston.....	....	150
Pelzer Mfg. Co., Pelzer.....	155	....
New Bedford Mfg. Co., N. Bedf'd.....	....	150
Pacolet Mfg. Co., Pacolet.....	165	....
Acushnet Mill Cor., New Bedford.....	....	163

This is by no means a bad record for seven Southern cotton mills, representing over 16 per cent. of the productive capacity of the cotton mills lying south of Virginia and east of the Mississippi river. In addition to the foregoing are mills whose shares are not listed, but which report excellent annual dividends. Even if these mills be taken as exceptions, they are sufficient to show that under good management cotton manufacturing in the South is capable of

yielding a profit. In contrast with the speech of Mr. Hanson was that of Mr. H. H. Hickman, president of the Graniteville Manufacturing Co., at the same meeting. Mr. Hickman is evidently a most zealous believer in the future greatness of the cotton manufacturing industry in the South, and no doubt is largely influenced in his opinion by his own success as a manufacturer. "It will not be wonderful," he said, "if the Southern States should manufacture the entire cotton crop in the next half century." His enthusiasm carried him far beyond the bounds of reason, as there is nothing in the past history of cotton manufacturing in the South to sanction any such statement as this. It is nothing less than an extravagant fancy. It means that within the next fifty years there will be in the South at least 50,000,000 cotton spindles, even on the present basis of consumption per spindle, which is not likely to continue as finer counts of yarns are spun, unless it is assumed that no further progress is made in the production of cotton in the South. But even with no increase in production, it is every way improbable that it will be absorbed in the consumption of the Southern mills. There is nothing to indicate it.

There is much misconception concerning the position of cotton manufacturing in the South and its relation to that in the North. Many unreasonable impressions are entertained in one way or another and extravagant notions indulged in of the decadence or transcendence of the Southern cotton manufacturing industry. Recent census statistics furnish much interesting material pertaining to these matters. A favorite way of noting the relative progress of Southern manufacturing is by the percentage process, which is valid only when properly used. Thus, within the past decade the spindle capacity of Southern cotton factories is alluded to as having increased 200 per cent., while that of the Northern factories increased but 25 per cent. This method is not only defective, but palpably misleading. I give certain census statistics as below, arranged and calculated for the purposes of this article regarding the manufacture of cotton:

Capital invested in United States, 1890, \$354,020,843
1880, 208,280,340
Increase.....\$145,740,497
Fifty-nine per cent. of this increase was in the New England States; 25.3 per cent. in the Southern States.

Number of spindles in United States,
1890.....14,088,103
Number of spindles in United States,
1880.....10,953,435
Increase.....3,134,668

Sixty-two per cent. of this increase was in the New England States; 29 per cent. in the Southern States.

Value of products in the United States,
1890.....\$67,981,724
Value of products in the United States,
1880.....192,090,110
Increase.....\$75,891,614

Fifty per cent. of this increase was in the New England States; 33 per cent. in the Southern States.

Number of hands, per 1,000 spindles, in
New England, 1890.....13.72
Number of hands, per 1,000 spindles, in
South, 1890.....23.42
Number of hands, per 1,000 spindles, in
South, 1880.....30.

The readers of this article can arrive at their own conclusions and draw their own lessons from these figures and their showings. The increase in the amount of capital employed in New England greatly exceeded that in the South during the decade from 1880 to 1890. It will also be observed that very similar results apply to the increase in the number of spindles and value of products. These statistics represent more nearly the relative progress of cotton manufacturing in the South and in New England. Labor wages in the South are much less per hand than they are in the North, but it will be noticed that over 70 per cent. more hands are employed per

1,000 spindles in the South than in the North.

The average annual wages per hand in the New England mills for 1890 was \$324.60, while in the Southern mills it was \$195.50. On the above basis of the number of hands per 1,000 spindles, the annual wages per 1,000 spindles was \$4,578.61 (\$195.50 × 23.42) in the South, against \$4,453.51 (\$324.60 × 13.72) in the North. This might indicate, in an imperfect way, the relative efficiency of labor North and South. Of course, I should not wish to be understood as meaning that this relative efficiency could be mathematically determined in so precise a manner as this. The character of the product of Southern mills requires a larger number of hands per thousand spindles than is the case of Northern mills. The number of hands for every thousand spindles in the South has been reduced from 30 in 1880 to 23.42 in 1890, and this will go on as finer yarns are spun, higher grade goods made and improved methods and more efficient machinery are introduced into mill operations. Yet, even with all conditions alike, more hands will always be required in Southern than in Northern mills, owing, if to nothing more, to the debilitating effect of the climate. Taking the number of hands alone—and it depends very much upon the proportion of men, women and children employed—and the same may be said of the average annual earnings. Children are, generally speaking, less efficient than women, and women less than men; and their earning powers are regulated accordingly, though not always in exact ratio of that efficiency. The tendency of labor employment is strongly toward that of men and less of children. The proportion of men, women and children employed in the cotton factories of the South in 1880 and 1890 was as follows:

The proportion in the New England mills was as follows:

Men, 36 per cent. in 1880, 43 per cent. in 1890
Women, 50 " " " 50 " "
Children, 14 " " " 7 " "

There was a larger proportion of men employed in 1890 than in 1880 in both the Southern and Northern mills, but it was at the expense of women in the first instance and of children in the second instance. The labor laws of the New England States have been very largely instrumental in changing the form of labor from children to adults. The South has not yet felt the effect of these laws, and the statute books of that section are free of them. There are no legal restrictions as to the running time of factories except in the State of Georgia, where eleven hours per day, or sixty-six hours per week, constitute the working time for all persons in cotton and woollen mills. The employment of children in the New England mills is reduced almost to a minimum, while it remains an important factor in Southern mill operations, and to that extent has a material bearing on the average wages of employees and the cost of production. If the elimination of child labor in factories is of advantage to the morals of a community, then it is manifest that in this particular the South is not in as advanced a position as the North was in 1880.

Boston, Mass.

THE Jackson (Tenn.) Woollen Mills have been purchased by Howell E. Jackson, of Nashville, under a mortgage which he held. Arrangements have been completed for the reorganization of the company and the immediate resumption of operations at the mill, to which a pants-making department will be added. Application for a charter for the new concern has been applied for by Howell E. Jackson, Robert A. Allison, Henry C. Anderson, Douglas Bale and

others. Mr. Allison will be secretary, and Mr. Bale, mill superintendent. The capital stock is placed at \$55,000, with privilege of increasing to \$100,000.

Growth of Cotton Manufactures as Shown by the Census.

The bulletin on statistics of cotton manufactures, issued by the census office, shows that during the ten years, from 1880 to 1890, there was a remarkable development in the cotton manufacturing industries of the United States. In 1880 the total spindles in operation were 10,653,435, and by 1890 this had increased to 14,088,103, a gain of 3,434,668 spindles, or 32.24 per cent. In the South this increase is particularly noticeable. Ranging the different sections in the order of actual increase in spindles, New England leads with 2,104,068 increase since 1880, the Southern States 1,045,176 increase, Middle States 209,334 and Western States 76,090. In the order of the percentage of increase over 1880 the South leads with a gain of 156.5 per cent., the Western States 86.3 per cent., New England States 24.3 per cent. and Middle States 16.5 per cent. Apart from the South the total increase in the country was 23.9 per cent. The increase in the number of looms is in the same proportion, the total for the country in 1890 being 43.9 per cent. more than in 1880. The increase in the South is 173.8 per cent., the West 85.1 per cent., New England 35.4 per cent. and the Middle States 28.9 per cent.

The following table shows the increase in the industry in the Southern States:

	1880.	1890.
No. establishments.....	186	254
Capital invested.....	\$21,976,713	\$61,124,096
Hands employed.....	26,827	41,481
Wages paid.....	\$3,517,115	\$8,651,514
Bales cotton used.....	232,896	578,844
Cost all materials.....	\$12,887,078	\$31,076,473
Value of products.....	\$21,038,712	\$46,971,503
No. spindles.....	667,754	1,712,930
No. looms.....	14,323	39,231

From this it will be seen that during the ten years \$39,147,383 additional capital has been invested in cotton manufacturing in the South. The number of hands employed has doubled and the wages paid nearly trebled. The value of the material used and of the product has more than doubled. The consumption of cotton by Southern mills has increased 344,958 bales, or 147 per cent. This latter is particularly noticeable, as the increase in consumption in the entire country, including the South, is but 43 per cent., and for all other than Southern States only 25 per cent. In other words, there were used in 1890 in this country 688,218 bales of cotton more than in 1880. Of this the South used 344,958 bales and all other sections 343,260 bales.

The following statement shows the quantity and value of the cotton goods manufactured in the South in 1890. In the census tabulation Maryland is grouped with the Middle States, but in the preceding figures it has been included with the Southern States. In this table it is omitted.

SUMMARY OF GOODS MANUFACTURED IN 1890.

	Quantity.	Value.
Plain cloths for printing or converting (sq. yds.)	23,365,020	\$1,117,409
Brown or bleached sheetings or shirting (sq. yds.)	250,526,060	12,729,063
Drills, twills and sateens (sq. yds.)	57,133,833	3,651,159
Ginghams (sq. yds.)	99,481,246	5,570,157
Cotton flannels (sq. yds.)	11,608,951	737,961
Fine or fancy woven fabrics (sq. yds.)	402,244	37,796
Duck (sq. yds.)	15,270,658	1,570,917
Ticks, denims and stripes (sq. yds.)	16,875,016	1,213,206
Bags or bagging.....	.....	1,105,006
Varns for sale (lbs.)	67,732,241	11,311,733
Sewing cotton (lbs.)	684,347	191,855
Twine (lbs.)	1,787,250	285,649
Batting or wadding (lbs.)	2,383,961	202,655
Rope (lbs.)	2,994,406	375,867
Waste (lbs.)	20,796,367	656,142
All other products.....	.....	757,316
Total value all products.....	.....	\$41,513,711

From this it appears that the principal goods produced in the South are sheetings, gingham and yarns. Of the first, 26 per cent. of the entire product of the country was made in the South; of the second, 36 per cent. and of the third, 41 per cent. Of cotton rope, the South produced 80 per cent. of the total made in the country.

The following statements give the details of the increase by States:

MARYLAND.		
	1880.	1890.
No. establishments.....	19	15
Capital invested.....	\$4,600,816	\$7,296,793
Hands employed.....	4,086	4,313
Wages paid.....	\$799,149	\$1,134,445
Bales cotton used.....	51,537	55,026
Cost all materials.....	\$2,887,933	\$3,373,116
Value of products.....	\$4,682,114	\$5,457,792
No. spindles.....	128,706	159,930
No. looms.....	2,425	2,995

VIRGINIA.		
	1880.	1890.
No. establishments.....	8	9
Capital invested.....	\$1,190,160	\$2,966,889
Hands employed.....	1,112	2,019
Wages paid.....	\$169,789	\$466,824
Bales cotton used.....	11,461	22,731
Cost all materials.....	\$610,391	\$1,197,234
Value of products.....	\$1,010,962	\$1,732,648
No. spindles.....	44,340	94,291
No. looms.....	1,322	2,517

NORTH CAROLINA.		
	1880.	1890.
No. establishments.....	49	91
Capital invested.....	\$2,858,809	\$10,775,134
Hands employed.....	5,343	8,742
Wages paid.....	\$439,659	\$1,626,196
Bales cotton used.....	27,642	114,871
Cost all materials.....	\$1,463,645	\$6,239,352
Value of products.....	\$2,554,482	\$9,593,443
No. spindles.....	92,395	357,786
No. looms.....	1,790	7,254

SOUTH CAROLINA.		
	1880.	1890.
No. establishments.....	14	34
Capital invested.....	\$2,776,900	\$11,141,834
Hands employed.....	2,053	8,192
Wages paid.....	\$80,844	\$1,646,574
Bales cotton used.....	33,621	135,342
Cost all materials.....	\$1,508,260	\$6,819,520
Value of products.....	\$2,867,769	\$9,866,798
No. spindles.....	82,331	332,784
No. looms.....	1,676	8,546

GEORGIA.		
	1880.	1890.
No. establishments.....	40	53
Capital invested.....	\$6,348,657	\$17,664,575
Hands employed.....	6,349	16,349
Wages paid.....	\$1,138,484	\$2,396,085
Bales cotton used.....	71,389	148,889
Cost all materials.....	\$4,019,673	\$7,778,626
Value of products.....	\$6,481,894	\$12,035,629
No. spindles.....	198,656	445,452
No. looms.....	4,493	19,489

ALABAMA.		
	1880.	1890.
No. establishments.....	16	13
Capital invested.....	\$1,226,900	\$2,853,013
Hands employed.....	1,490	2,137
Wages paid.....	\$239,998	\$447,173
Bales cotton used.....	14,762	29,921
Cost all materials.....	\$1,293,711	\$1,459,648
Value of products.....	\$1,228,019	\$2,196,721
No. spindles.....	49,432	79,434
No. looms.....	863	1,592

MISSISSIPPI.		
	1880.	1890.
No. establishments.....	8	9
Capital invested.....	\$1,122,110	\$2,953,743
Hands employed.....	722	1,181
Wages paid.....	\$133,214	\$296,981
Bales cotton used.....	6,411	17,366
Cost all materials.....	\$337,149	\$971,970
Value of products.....	\$97,993	\$1,333,398
No. spindles.....	18,508	57,094
No. looms.....	644	1,352

KENTUCKY.		
	1880.	1890.
No. establishments.....	3	8
Capital invested.....	\$360,000	\$1,376,132
Hands employed.....	352	534
Wages paid.....	\$93,850	\$189,039
Bales cotton used.....	4,850	11,970
Cost all materials.....	\$253,818	\$643,949
Value of products.....	\$418,296	\$1,090,608
No. spindles.....	9,922	42,942
No. looms.....	73	677

TENNESSEE.		
	1880.	1890.
No. establishments.....	16	20
Capital invested.....	\$1,145,600	\$2,928,657
Hands employed.....	1,644	2,174
Wages paid.....	\$161,079	\$495,428
Bales cotton used.....	10,436	33,114
Cost all materials.....	\$353,791	\$1,705,062
Value of products.....	\$874,717	\$2,507,719
No. spindles.....	35,736	97,824
No. looms.....	818	2,043

ALL OTHER SOUTHERN STATES.		
	1880.	1890.
No. establishments.....	7	5
Capital invested.....	\$331,000	\$2,067,225
Hands employed.....	276	1,356
Wages paid.....	\$27,377	\$328,759
Bales cotton used.....	2,634	19,131
Cost all materials.....	\$138,697	\$932,866
Value of products.....	\$183,376	\$1,348,637
No. spindles.....	11,575	66,980
No. looms.....	219	1,726

In the order of capital invested in 1890, Georgia leads, followed in order by South Carolina, North Carolina, Maryland, Virginia, Tennessee, Alabama, Mississippi and Kentucky. In the order of the increase in capital employed from 1880 to 1890, the States stand as follows: Georgia, South Carolina, North Carolina, Maryland, Tennessee, Virginia, Alabama, Kentucky and Mississippi. In the order, however, of the percentage increase, South Carolina leads with 301 per cent.; Kentucky, 252 per cent.; North Carolina, 277 per cent.; Georgia, 178 per cent.; Tennessee, 155 per cent.; Virginia, 149 per cent.; Alabama, 128 per cent.; Mississippi, 83 per cent., and Maryland, 58 per cent.

New Zealand Flax.

By J. N. Ingram.

The most famous plant in all the countries on the Pacific ocean is the New Zealand flax. It is one of the most valuable cloth-producing weeds on the earth. It is the only vegetation growing in the Australias from which clothing is made. It is indigenous to and is found only in New Zealand and on Norfolk island. It grows luxuriantly on the loamy flats in the Zealandian forests and on the rich bottoms along the streams. It is fond of a moist soil, and attains a great height and body along the banks of the rivers.

The shores of many of the New Zealand watercourses and lakes are overgrown with flax like the flag-covered flats at the mouth of the Potomac, the marshes on the Chesapeake bay and the lagoons along the Gulf coast around New Orleans. It grows most prolific on the North island of New Zealand. The plant was used by the native Maoris for the manufacture of cloth long before the islands were discovered by European navigators. Its great strength made the fibre pliable and durable, and the flax fabrics sustained long usage and heavy wear. Its durability amply paid for its tedious and primitive manufacture into cloth, and rivaled the service of buckskin in apparel.

The Maoris used the large strands to construct baskets for holding household goods and carrying supplies and outfits on traveling tours. The baskets, if kept dry, would outlast the American split oak goods, as they would neither crack or break. The natives made fishing nets of the weed for seining their rivers and bays. They also manufactured sails for their boats from the fibre, and the little crafts met by the early navigators cruising the harbors and lakes of Zealandia were rigged in flax.

Ropes and lines were twisted from the commodity, and were stronger and superior to those of English hemp.

The Maoris used the cords for fastening together the frames of their huts and binding on the roof thatch over their dwellings.

Mats for the floors and sheds of the houses were largely made from the weed. Some of them were stained with berries

and colored with the dyes of bark, and showed unique designs of decoration with fancy and often delicate shades of tinting.

The bedding as well as the clothing of the natives were manufactured from the leaves of the flax. When Captain Cook visited the ports, in 1769, he found the aborigines a flax-clad people, and their costumes were both comical and picturesque. Many natives whom I have met still wear the primitive raiment.

The flax is of different species and of varied character and quality. The varieties are the *Phormium tenax*, *longa*, *Atewiki*, *Tapoto*, *Tihore*, *Tuhari* and *Wharariki*.

The *Atewiki* is susceptible to bleaching and produces a white fibre. It is used for manufacturing fine cloth and fancy mats.

The *Tuhari* is a wild flax and grows in the swamps, and attains a height of nine and fifteen feet. It has a strong fibre and is a hardy plant.

The *Wharariki* grows on the hills and elevated lands, and will not flourish in a wet soil. It thrives mostly in the colder regions on the South island. It has but little fibre, and of an inferior and coarse quality.

The *Tihore* is cultivated by the natives in fields and patches and improved by cultivation. It is the finest species grown and is used only in the production of extra fine goods. Its average height is from three to five feet. It commands high prices and a ready market. The chiefs and their daughters wear costumes of this rare fabric, and the foreign demand is great.

The *Phormium tenax* is the largest and most vigorous species. It grows wild and is found in clusters of plants. The stalks sometimes reach eighteen and twenty feet in height. The leaves are from four to thirteen feet in length and from one to four inches wide. The foliage is evergreen, and the stems of the plants are crowned with bunches of red and yellow flowers. The weed comes to maturity in three years and prefers a damp soil.

The leaves of the plants contain the fibre, and each weed has thirty and thirty-five leaves. Ninety-six leaves will produce a pound of flax.

The leaves are full of mucilaginous substance. In the preparation of the fibre for market, and its reduction from its natural state, considerable trouble is experienced in separating the gummy matter from the leaves. Hot water, acids and alkalis are used to dissolve the gum and extract the sticky property from the plant. When matured the leaves, which contain the fibre, are collected by the Maoris and submitted to a process of treatment to prepare the flax for use.

The native method of treating the weed was crude and simple, and consumed a great deal of time and labor. Their methods fail to collect more than a third of the fibre in the plants; but the goods made by them is superior to that dressed by the foreign residents.

The leaves are placed by the natives in flowing streams for several days, and then removed to benches and pounded with rocks or wooden blocks to separate the fibre from the mucous substance. They subject the stuff to several processes.

The English settlers have arranged and introduced machinery suited for dressing the flax. The fibres are now removed from the plants by mechanism. The leaves are passed between revolving rollers and the vegetable tissues crushed and separated from the fibre. The flax is then soaked and washed and hung out to dry and bleach. When ready it is packed in bales for exportation.

The wild plants produce a ton of fibre from four tons of leaves. The cultivated plants make on an acre two and a-half tons of flax to the acre. Its production can be increased to an indefinite quantity, as the soil and climate are its home and suited to its growth. The increase by cul-

tivation will doubtless be enlarged as the territory is occupied by homesteads, and the production of wild plants decrease. The plant, however, can be exported to other countries and cultivated abroad.

The strength of the New Zealand flax is greater than that of any in the world, and is double the strength of the hemp and flax in other countries. It ranks next to silk in its strength.

It became a commodity of export in the early settlement of the islands, and found its way to foreign markets in 1810. By the year 1840 the exportation had reached over 1,000 tons, with a value of over \$100,000. Within twenty-five years following the exportations doubled in amount and value.

The following table will show the increase and fluctuations of the flax trade through a series of years:

Year.	Amount, Tons.	Value.
1870.....	5,400	\$6,637.00
1871.....	4,200	434,930
1872.....	3,900	477,140
1873.....	6,400	660,230
1874.....	2,600	180,990
1875.....	630	36,360
1876.....	895	87,760
1877.....	1,050	90,390
1878.....	620	51,690
1879.....	440	37,790
1880.....	860	74,760
1881.....	1,030	126,160
1882.....	2,025	201,380
1883.....	1,119	78,752
1884.....	1,667	145,128
1885.....	1,952	172,136

Native wars and other labor disturbances interrupted the production of flax from time to time, and made its collection irregular.

Its cultivation has of late years received a fresh impetus, and its regular yield, gradual and steady increase in quantity may be depended on.

The price of flax annually fluctuates like all other commodities according to the supply and demand.

The New Zealand flax has been introduced into the United States, and it is now largely used in America for the manufacture of ropes, cords and binding twine for the harvest field. The American demand for this specialty is on a steady increase.

In 1887 only twelve tons, valued at \$1,192, were exported to the United States.

In 1889 the exports to America had grown to 2,901 tons, with a value of \$310,650.

As the yield of flax and hemp has greatly diminished in other countries of late years, the price of the commodity has largely advanced.

The quality of the New Zealand flax gives it a premium over all the other products of the world. The profit on its production will be enlarged, as well as the demand, and more extended flax culture may be expected at the Antipodes.

The extent of flax-producing lands in the different provinces of New Zealand is estimated by the Crown Land Office in the colonial capital at Wellington as follows: The native domain contains 147,260 acres, the colonial residents hold 179,450 acres, the crown has 119,680 acres.

The two islands of New Zealand have a total territory of 446,400 acres of flax-growing soil.

Washington, D. C.

A MOVEMENT for the erection of a cotton mill on the instalment plan is afoot at Concord, N. C. Mr. J. W. Burkhead has taken charge of the matter, and proposes a capital of \$50,000 in shares of \$100 each, to be paid for at the rate of fifty cents per share per week. It is to be hoped that Mr. Burkhead will meet with success in his plans and succeed in building the mill.

WORK on the Atherton Mills, at Charlotte, N. C., is progressing rapidly, and the building is about completed. Some of the machinery has arrived and is now being placed. Mr. R. M. Miller, vice-president and treasurer of the company, will manage the business of the mill, and operations will commence early next year.

Sheep-Raising in North Carolina.

By C. H. Nimson.

The sheep-raising industry in this section is not yet far enough advanced in practical hands to give reliable information about the results. The western part of North Carolina, composed of the counties of Mitchell, Watauga and Ash, is to my personal knowledge in every way suited and has exceptional advantages for raising mutton and wool and for marketing them.

The country is a plateau 3,500 feet above sea level, but so mountainous that only after persons become acquainted with the location can they comprehend it as a mountain plateau.

The greater part of the soil is decomposed Huronian slate enriched by the accumulation for ages of vegetable matter falling on it from the dense forests. In many cases this rich soil is found on the mountain sides and summits 4,000, 5,000 and 6,000 feet above sea level, producing as fine palatable grass as I have seen anywhere, and by the excessive rainfall stimulated to vigorous growth the entire growing season.

The grasses are also fattening, but the nature of the soil is not calculated to successfully carry any but light stock. Heavy cattle and horses pack it, while cattle also injure the pastures by pulling the soil, which does not hold the roots so firmly that the plant can be pulled off without injury to the setting. Sheep, being light on foot and cutting the grasses, never injure but always benefit them. Overstocking with sheep in this section will hurt the sheep but not the pastures. The latter would spring up quickly after the sheep were starved out.

Fresh spring water is plentiful all along the mountain slopes and in the coves of the summits, while outside of the springs and brooks the surface is dry, the friable character of the soil readily absorbing the excessive moisture, leaving the surface dry and healthful to the sheep.

The climate is also favorable; the winters are mild, and the summers cool, with much less of the animal fly pest than one finds in sections located at lower altitudes.

The rich soil and excessive moisture has produced a heavy growth of timber, which is the greatest drawback to making sheep pastures, but this is compensated by the protection it gives the country against the practice in sheep husbandry called "ranching" or "ranching," so attractive to many inexperienced men, who fail by their misdirected efforts, and discourage all further attempts to establish the industry on a proper and legitimate basis.

Sheep-raising and wool-growing here must be conducted in the same manner as it is done in Western Pennsylvania, Ohio, Michigan and other of the older States, not as it is done on large ranches in the newer States and Territories. It must take on the nature of the cash products, into which is concentrated the surplus of well regulated mixed farming. When this is done I believe this section will compete with any in the country, producing wool and mutton successfully.

Experienced parties are now engaged in the business, and so far have realized their expectations, but have not yet gone far enough to justify them in giving your readers their results as entirely reliable.

Cranberry, N. C.

THE Reidsville (N. C.) Cotton Mills, manufacturers of 20s and 22s single and 20s two-ply yarns, have recently put in a new 300 horse-power Hamilton-Corliss engine, 640-spindle Whiting filling frames, and a slubber and sixty spindles from the Providence (R. I.) Machine Works. The mill is now operating 6,000 spindles, and was shut down for three weeks to put in the above machinery and make other necessary repairs and improvements.

Raising Cotton in Texas.

Mr. William Koppe is the proprietor of a great cotton plantation in Brazos county, Texas, which has been developed and is managed upon a systematic and scientific basis. This model plantation is interestingly described by a correspondent of the *Houston Post*, who visited the place recently in company with the owner. What he wrote is given below:

"Arriving at the magnificent Brazos county iron bridge which spans the Brazos river at the old Jones ferry, we entered this widely celebrated, fertile farming valley—the well-known W. J. Moore place to the right, the John Newsom place down the river, and next Major H. K. White's, James O. Chance and divers other farms.

"Arriving at Mr. Koppe's place, we enter the premises through a large avenue or 'turn row,' as they are called, which to the right and left presents a picture to behold. The great improved long staple cotton now just profusely open, hanging in great snowy white bolls intermingled with just enough green foliage to set off the picture, looks like a myriad of snowballs strung upon wires. This sight is not merely for a moment, for it extends over hundreds of acres and many miles of land. To be sure, there are 1,600 acres of land under this one fence, 600 of which are planted in the long staple cotton. Nor is this all, for the scene changes as if looking into a beautiful kaleidoscope, so far are they from monotony. Great broad acres of corn stretch out elsewhere, field peas, pumpkins and vegetables here and there. While all these scenes are transpiring the visitor is whirling past neat cottages occupied by tenants, from the great brick and rock chimneys of which curled the beautiful blue smoke of peace, while the pleasant aroma of fried bacon and corn hoe cake bespoke the contentment of the occupants as 'aunt so and so' pokes her happy head out of the door and the 'genuine, only original, black pickaninny,' with pearly white teeth, gazes at the unusual sight of such a turnout in their midst, and salute the visitors with 'good morning.'

"But we are a little too fast. A few facts and figures should here be presented. Mr. Koppe owns in this tract 6,000 acres all under fence, except fifteen feet all around his place, left for public roads or other public purposes. 1,600 acres are in cultivation—1,000 in cotton, 500 in corn, including seventy acres of peas with corn, and the remainder in other products enumerated above, including thirty acres of alfalfa, the finest in Texas and the prettiest sight ever looked upon, of which we shall later tell. On these premises are seventy-two rented houses, well built and comfortable, built of native woods sawed on the plantation, with brick chimneys made of brick burned also on the place. There are 350 people, seventy-five mules and twenty-four yoke of oxen on the farm. Two artesian wells supply the barns and stock with water, while the third is being sunk now and is down about 600 feet, and is the largest well in the bottom. Surface wells supply water for tenants.

"Arriving at headquarters, the party alighted for dinner. These premises are the most thoroughly equipped and appointed of any plantation we have seen. The houses, stables, lots, corn cribs and all are simply models. It is here Mr. Koppe's magnificent new gin is located. The entire plant was manufactured expressly for him, and peculiarly constructed for the ginning of long-staple cotton. Three 80-saw gin stands, with a double revolving cotton press, constitutes the plant with a capacity of thirty bales per day. The gin is provided with stalls or bins for each customer's cotton, running in front of which is the patent blower cotton converter, which takes the seed cotton from the bin and distributes it to the gin stands.

The cottonseed from the improved long-staple cotton is stored here and specially cured for planting purposes, as Mr. Koppe sells largely to other planters. The boiler capacity for this work is an eighty horse-power Atlas, which also runs a mammoth saw mill, grist mill and corn crusher, the latter crushing corn in the shuck, cob and all, for feeding purposes. Mr. Robert Newsom is Mr. Koppe's general manager, while Mr. A. S. Davis is in charge of the machinery department and Captain McCann is in charge of all stock. Besides the work stock on Mr. Koppe's place, there are some seventy brood mares, from which the finest young mules are raised. There are also a half-dozen beautiful little Shetland ponies. Some of the finest blood milk and beef cattle and hogs are also raised each year, and there were to be seen on this occasion about fifty large fat hogs ready to kill and which would weigh from 150 to 300 pounds each.

"The quantity of feedstuff raised annually on Mr. Koppe's place is immense, and includes corn, sorghum, alfalfa, peas, fodder and various growths of grasses. There is in course of erection on these premises one of the largest barns in the Brazos valley. It is 106x80 feet, two stories high, and another such building is to be erected as soon as the one now almost finished is out of the way.

"A visit was made to the alfalfa patch, a beautiful plot of ground, about thirty acres, the greater part of which has been cut five times this year and will again soon be ready for the reaper. This luxuriant and excellent hay yields about one ton per acre each cutting, and as it will be ready to cut again in a few weeks, Mr. Koppe will reap six tons of feed—and the finest quality that grows—per acre, a record that cannot be surpassed by any feedstuff on any land in this or any other country. Mr. Koppe informed us that he would plant a considerably increased acreage of alfalfa the coming season, when its production will become one of extraordinary moment and profit.

"Of the long-staple cotton the writer has to say that its growth, prolific yield and superiority of staple cannot be equalled by any other known cotton. The fibre is fine, soft and silken, while in length it ranges from one and three-eighths to one and three-quarters inches, but averaging about one and one-half inches, and its strength is remarkable. In fact, the great value of this new staple is attested by the fact that while ordinary cotton sells for seven cents per pound in this market, Mr. Koppe is offered ten cents for his long staple. From the 600 acres planted in this cotton the yield will be about 400 bales this year, and with its increased value in the markets it is no wonder Mr. Koppe will plant all the land he can possibly put in cotton in the long staple. As a plain business proposition it is good sense to do so, for an acre of land had just as well raise 10-cent as 7-cent cotton, provided it is good, rich soil, which is a requisite to raising this cotton. Any good river bottom land will raise it."

Cotton Market.

NEW ORLEANS, LA., November 28.
Editor Manufacturers' Record:

Since our last another extreme advance has taken place, carrying March in this market to 9.90, but there was no official quotation of that figure on account of the trading being done on a holiday. Spot cotton has advanced here to 9 7/8 and really sold at higher figures, but it has since lost 1-16, although without any good reason, as the factors and holders of spot cotton here and elsewhere are unanimous on one point, and that is the spinner must take our cotton sooner or later, and that when he does come in he will have to pay the piper to get it. In the meantime contracts suffer the usual influences where one of either a bearish or bullish character comes in, and

March sold here to-day at 9.60, owing to large realizing by the longs, brought about by a disappointing Liverpool market and a freer movement than was expected. The receipts here to-morrow are estimated at 23,000, against 21,000 last year, but after Wednesday next we expect a general falling off, and we think December and January will startle the bears in the way of a small movement. We cannot do better than to copy a portion of a letter received by us from one of the leading cotton firms in Liverpool and the largest importers of American cotton at that market. They say, under date of November 12, as follows:

We also have an idea that the strike will not continue long, and in that event buying will be very brisk on the part of spinners, as they do not hold any stocks whatever; in fact, the whole buying power of the world, i. e., the spinners, are without cotton and behind the market; therefore I consider a large long interest a dangerous one, because that cotton is not held by the consumer.

From these same people we have to-day a cable saying that it is rumored that the strike will be settled during this week. In that event it would throw a large amount of buying again on the market for actual cotton, which will stimulate futures, and if, added to this, receipts begin to lose, we may see March cotton in this market carried above ten cents within the next two weeks. Messrs. Hill, Fontaine & Co. to-day report a decrease as compared with last year in Tennessee of 5 1/2 per cent.; Mississippi, 5 1/2 per cent.; Arkansas, 47 per cent.; Alabama, 43 per cent., or an average of 49 1/2 per cent. A cable to-day also says that a strong combination is talked of in Liverpool by prominent people who have been very largely bearish to break the market. How far this can be done remains to be seen. It can only come about through forcing the planter and merchant to part with the actual cotton. Can the bears accomplish this? The Southern people recognize that the crop is a short one, which impressions are being daily confirmed, and it is simply a question between them and the people who are short of contracts as to which side will win. If the crop is only 6,000,000, of which there is every probability, we feel, as do a majority, that prices should rule considerably higher. The fight will be a bitter one, no doubt a prolonged one, and we are continually bringing in our daily market report before a very large number of people the position as we see it, and that is simply this, that the big people who are short of contracts are assuming that their tactics of old can be carried on again this year—that is, they are assuming that the long interest is a very weak one, and that by forcing down contracts they can carry spot cotton down with them. We don't believe this, and we think that the bears will be taught a lesson this year, as influential as they may be, that will be very lasting.

ATWOOD VIOLETT & CO.

CLOSING PRICES OF FUTURES NOVEMBER 30.

Months.	New Orleans.	New York.	Liverpool.
December.....	9.20	9.50	5 9-64 buyer
January.....	9.25	9.57	5 12-64 sell
February.....	9.29	9.70	5 14-64
March.....	9.36	9.81	5 15-64
April.....	9.45	9.94	5 17-64 sell
May.....	9.50	10.01	5 19-64 buy
June.....	9.60	10.10	5 22-64
July.....	9.65	10.16	5 24-64
August.....	....	10.22	....
September.....	....	....	....
October.....	....	....	....
November.....	....	....	....
Tone of market.	Steady.	Barely steady.	Firm.

CLOSING PRICES OF SPOT COTTON NOVEMBER 30.

Grade.	New Orleans.	New York.	Liverpool.
Middling.....	9 11-16	9 15-16	5 1/8
Low middling.....	9 5-16	9 1/2	5 1/4
Good ordinary.....	8 13-16	8 13-16	4 3/4
Tone of market.	Easy.	Quiet and steady.	Steady.

THE erection of a cotton mill in Columbia, Ala., is talked of by several capitalists of that place.

DIRECTORY OF SOUTHERN COTTON MILLS

Below is given a list of all the cotton mills in the Southern States which we have compiled from original data, revised by the mill owners themselves. We have eliminated from the list all mills that have long been idle and which may practically be regarded as abandoned, so that this directory represents what may properly be considered as the active mills in the South. In this list we have included mills that spin or weave cotton fabrics, cotton twine and rope mills and batting factories, which accounts for the absence of both looms and spindles in several instances.

States.	Mills.	Spindles.	Looms.
Alabama.....	28	212,448	3,903
Arkansas.....	5	16,640	266
Florida.....	2	1,400	
Georgia.....	64	514,144	11,594
Kentucky.....	8	54,088	748
Louisiana.....	6	55,132	1,504
Maryland.....	23	180,930	3,730
Mississippi.....	11	79,772	1,895
North Carolina.....	130	598,016	11,045
South Carolina.....	51	516,526	12,095
Tennessee.....	26	128,852	2,547
Texas.....	12	79,564	2,368
Virginia.....	11	113,344	3,418
Total.....	377	2,540,856	55,375

The census figures furnish the only basis of comparison, but even these do not show the entire number of mills at that date, as idle plants and mills under construction were not included. Our figures show a gain since June, 1890, when the census was compiled, of 123 mills, 727,926 spindles and 16,144 looms.

Mills that are under construction are designated thus *

Name.	Location.	Spindles.	Looms.
Anniston Mfg. Co.....	Anniston.....	11,400	320
M. M. Smith Co.....	Autaugaville.....	2,200	63
Bell Factory.....	Bell Factory.....	3,216	80
Lua Cotton Mill Co.....	Bridgeport.....	6,000	
Columbia Cotton Co.....	Columbia.....	2,500	
Tuscaloosa Mfg. Co.....	Cottontale.....	12,000	300
Falls Mfg. Co.....	Darlington.....	8,600	
Eufaula Cotton Mills.....	Eufaula.....	6,328	224
Alabama Cotton Mfg. Co.....	Florence.....	10,000	
Embry, Son & Jennings.....	Florence.....	2,500	30
Dallas Cotton Mfg. Co.....	Huntsville.....	25,000	750
Huntsville Cotton Mill Co.....	Huntsville.....	10,048	
*West Huntsville Cot. Mill Co.....	Huntsville.....	5,200	
Cherokee Mills Co.....	Mobile.....	1,350	
Adams Cotton Mills.....	Montgomery.....	3,000	96
W. H. Cherry & Co.....	Mountain Mills.....	8,600	
Coosa Mfg. Co.....	Piedmont.....	9,856	
Prattville Cotton Mills.....	Prattville.....	3,700	140
Coleman Cotton Mills Co.....	Riverside.....	42,000	1,000
Rosedale Mfg. Co.....	Rock Mills.....	5,000	75
Matthews Cotton Mills Co.....	Selma.....	13,500	285
Hurricane Creek Mfg. Co.....	Spring Garden.....	1,000	
O. I. Hinkley.....	Stalladega.....	3,000	
Alabamsee Falls Mfg. Co.....	Talladega.....	20,000	368
Henderson Knitting Mills Co.....	Troy.....	720	
Tuscaloosa Cotton Mills.....	Tuscaloosa.....	172	
Searcy Rope and Yarn Mill.....	Tuscaloosa.....	3,000	
Union Springs Cotton Mills.....	Union Springs.....	4,000	
Arkadelphia Cotton Mill.....	Arkadelphia.....	2,400	74
J. A. Hughes.....	Centre Point.....	240	10
Huntington Cotton Mills.....	Little Rock.....	8,000	
Little Rock Cotton Mills Co.....	Little Rock.....	3,000	
Mammoth Springs Cotton Mills.....	Mammoth Springs.....	3,000	122
Hugh Dixon.....	Lawley.....		
Tallahassee Factory.....	Tallahassee.....	1,400	
Harmony Mills.....	Alice.....	576	
Athens Mfg. Co.....	Athens.....	10,000	350
Princeton Mfg. Co.....	Athens.....	3,850	100
Star Thread Mfg. Co.....	Athens.....	7,500	60
Atlanta Cotton Mills.....	Atlanta.....	17,572	504
Exposition Cotton Mills.....	Atlanta.....	16,000	480
Fulton Bag and Cotton Mills.....	Atlanta.....	13,000	479
Algernon Mill.....	Augusta.....	4,410	150
Augusta Factory.....	Augusta.....	27,632	807
Dartmouth Spinning Co.....	Augusta.....	11,000	
Enterprise Mfg. Co.....	Augusta.....	33,000	904
Globe Cotton Mills.....	Augusta.....	3,500	
John P. King Mfg. Co.....	Augusta.....	40,288	1,136
Riverside Mills.....	Augusta.....	3,600	886
The Sibley Mfg. Co.....	Augusta.....	35,136	
Warwick Cotton Mills.....	Augusta.....	2,500	
Hutchinson Mfg. Co.....	Banning.....	5,000	
Barnesville Mfg. Co.....	Barnesville.....	6,264	
Kennon Mfg. Co.....	Brunswick.....	3,000	
Charles Roberts.....	Cedartown.....	3,000	65
Porter Mfg. Co.....	Clarksville.....	3,000	124
Chattahoochee Falls Co.....	Columbus.....	4,496	110
Clegg Mfg. Co.....	Columbus.....	46,000	1,600
Eagle & Phoenix Mfg. Co.....	Columbus.....	12,000	426
Paragon Mfg. Co.....	Columbus.....	162	
Steam Cotton Mill.....	Columbus.....	4,000	
Swift Mfg. Co.....	Columbus.....	8,700	380
Hamburger Cotton Mills.....	Columbus.....	3,000	
Cordale Mfg. Co.....	Cordale.....	3,600	
Randolph Mfg. Co.....	Cuthbert.....	3,276	
Crown Cotton Mills.....	Dalton.....	3,000	150
*Swift Cotton Mills.....	Elberton.....	4,000	125
Forsyth Mfg. Co.....	Forsyth.....	3,000	
Gorgia Mfg. Co.....	Gainesville.....	2,884	
Griffin Mfg. Co.....	Griffin.....	5,000	178
Kincaid Mfg. Co.....	Griffin.....	6,410	200
High Shoals Mfg. Co.....	High Shoals.....	6,100	
Jewell Mills.....	Jewell.....	3,336	81
Union Cotton Mills.....	La Fayette.....	5,500	100
La Grange Mills.....	La Grange.....	5,000	75
Oscolean Mill.....	Lithonia.....	1,296	6
Bibb Mfg. Co.....	Macon.....	23,000	
Manchester Mfg. Co.....	Macon.....	6,000	
Seawan Cotton Mill.....	Newnan.....	6,300	
Walton Mfg. Co.....	Newnan.....	2,600	
Oglethorpe Mfg. Co.....	Panola.....	4,000	
Morris Southern C. Y. Mfg. Co.....	Panola.....	5,000	
Houston Factory.....	Perry.....	2,800	60
Porterdale Mills.....	Porterdale.....	5,000	
Quitman Mills.....	Quitman.....	1,854	30
Elmira Cotton Mills.....	Reynolds.....	1,500	40
Raccoon Mfg. Co.....	Raccoon Mills.....	3,424	94

Name.	Location.	Spindles.	Looms.
Richmond Factory.....	Richmond.....	5,200	
Rome Cotton Factory.....	Rome.....	5,000	94
Roswell Mfg. Co.....	Roswell.....	17,000	120
Savannah Cotton Mills.....	Savannah.....	10,000	
Shoal Creek Mfg. Co.....	Shoal Creek.....	800	
Jas. A. Atherton.....	Too Night.....	800	
Trion Mfg. Co.....	Trion Factory.....	24,342	664
Troup Factory.....	Troup Factory.....	1,600	52
Wayman Factory.....	Waymanville.....	3,400	72
Galetton Cotton Mills.....	West Point.....	7,500	200
West Point Mfg. Co.....	West Point.....	15,000	420

Name.	Location.	Spindles.	Looms.
Argonaut Cotton Mill Co.....	Covington.....	4,000	
Graham Mfg. Co.....	Grahamton.....	3,000	73
Henderson Cotton Mills.....	Henderson.....	20,000	615
Louisville Cotton Mill Co.....	Louisville.....	11,000	
Louisville Cotton Mill Co.....	Louisville.....	11,000	
Louisville Girth & Bkt. Mills.....	Louisville.....	588	10
Maysville Cotton Mills.....	Maysville.....	8,000	
Owensboro Woolen Mills Co.....	Owensboro.....	1,500	50

Name.	Location.	Spindles.	Looms.
Monroe Cotton Co.....	Monroe.....		
Crescent City Y. & K. Mill.....	New Orleans.....	1,248	
Kerr-O'Brien Co.....	New Orleans.....		
Lane Mills.....	New Orleans.....	10,884	384
Maginnis Cotton Mills.....	New Orleans.....	40,000	1,060
Courtableau River Mills Co.....	Washington.....	3,000	60

Name.	Location.	Spindles.	Looms.
Alberton Cotton Mills.....	Alberton.....	12,000	325
Columbia Mills.....	Baltimore.....	2,100	
Elk Mills.....	Bank.....	4,000	100
Gray Mfg. Co.....	Ellicott City.....	3,250	104
Thistle Mills Co.....	Ellicott City.....	8,000	28
Dumfries Mill.....	Elkton.....	84	
Franklinville Mills.....	Franklinville.....	3,500	40
Laurel Mills.....	Gulford.....	1,800	50
Laurel Mills.....	Laurel.....	11,000	250
Mt. Vernon Co.....	Mt. Vernon.....	42,600	520
Mt. Washington Mills.....	Mt. Washington.....	5,000	108
Oella Mills.....	Oella.....	10,000	285
Mt. Vernon Co.....	Phoenix.....	6,000	150
Powhatan Mfg. Co.....	Powhatan.....	4,500	121
Savage Factory.....	Savage.....	11,000	275
A. D. Irwin & Bro.....	Snow Hill.....		70
Warren Mfg. Co.....	Wethersville.....	6,000	160
Ashland Mfg. Co.....	Wethersville.....	3,000	77
Clippert Mill.....	Woodberry.....	10,072	
Druid Mills.....	Woodberry.....	13,008	269
Meadow Mill.....	Woodberry.....	10,000	
Park Mill.....	Woodberry.....	3,500	
Woodberry Mills.....	Woodberry.....	9,700	97

Name.	Location.	Spindles.	Looms.
Delta Cotton and Woolen Mills.....	Carrollton.....	30,000	30
Tombigbee Cotton Mills.....	Columbus.....	5,600	200
Haskins Co.....	Haskins.....	1,500	40
East Mississippi Cotton Mill.....	Meridian.....	2,500	50
Natchez Cotton Bating Mill.....	Natchez.....		
Natchez Cotton Mills Co.....	Natchez.....	11,872	330
Rosalie Mills Co.....	Natchez.....	6,500	160
Port Gibson Cotton Mill.....	Port Gibson.....	4,400	100
Stonewall Mfg. Co.....	Stonewall Station.....	7,216	188
Vocoma Mills.....	Water Valley.....	5,000	
Mississippi Mills.....	Wesson.....	15,181	796

Name.	Location.	Spindles.	Looms.
C. E. Graham Mfg. Co.....	Asheville.....	8,448	400
Stonesville Cotton Mill.....	Belmont.....	2,300	24
Big Falls Cotton Mill.....	Big Falls.....	7,000	
Mt. Pleasant Cotton Mills.....	Brick Church.....	2,000	101
Montgomery Cotton Mills.....	Burlington.....	7,500	94
Aurora Cotton Mill.....	Burlington.....	4,000	128
Carolina Cotton Mills.....	Burlington.....	3,000	60
Elmira Cotton Mill.....	Burlington.....	3,750	252
Glencoe Cotton Mills.....	Burlington.....	3,120	186
Lakeside Cotton Mills.....	Burlington.....		300
E. M. Holt Plaid Mill.....	Burlington.....		140
Windsor Cotton Mill.....	Burlington.....	5,000	145
A. M. Odeh Mfg. Co.....	Bynum.....	3,500	140
New Cotton Mill.....	Carthage.....	2,000	168
Worth Mfg. Co.....	Central Falls.....	2,500	
Cedar Falls Cotton Mill.....	Cedar Falls.....	3,036	
Ornith Cotton Mill.....	Chadbourne.....		
Ada Mfg. Co.....	Charlotte.....	10,224	
*Atherton Mills.....	Charlotte.....	5,000	
*Alpha Mills.....	Charlotte.....	6,000	
Highland Park Mfg. Co.....	Charlotte.....		590
Charlotte Cotton Mills.....	Charlotte.....	9,000	
Victor Cotton Mills.....	Charlotte.....	18,300	
Cherryville Mfg. Co.....	Cherryville.....	3,000	
Cleveland Cotton Mills.....	Cleveland Mills.....	7,100	
Cannon Mfg. Co.....	Concord.....	9,776	255
Odell Mfg. Co.....	Concord.....	21,000	846
Vadkin Falls Mfg. Co.....	Concord.....	5,000	
Cumberland Mfg. Co.....	Cumberland.....	3,200	88
Dallas Cotton Mills.....	Dallas.....	2,500	
Cornelius Cotton Mills.....	Davidson College.....	4,900	
Linden Mfg. Co.....	Davidson College.....	2,000	
Morgan, Cline & Gaffney.....	Double Shoal.....	2,000	
Commonwealth Mill.....	Durham.....	6,000	
*The Erwin Cotton Mills Co.....	Durham.....	5,000	200
*Pearl Cotton Mills.....	Durham.....	10,000	
Durham Cotton Mfg. Co.....	Durham.....	11,016	244
Henrietta Mills.....	Elizabeth City.....	1,000	
Fowler's Net & Twine Factory.....	Elizabeth City.....	900	
Elkin Mfg. Co.....	Elkin.....	1,800	
Altamabaw Mills.....	Elon College.....	6,496	162
Osmee Cotton Mills.....	Elon College.....	3,600	200
Tuscarora Cotton Mills.....	Enfield.....	1,500	
Enterprise Mfg. Co.....	Enterprise.....	2,600	14
Bluff Mills.....	Fayetteville.....	3,056	62
Fayetteville Cotton Mills.....	Fayetteville.....	3,124	
Hope Mills Mfg. Co.....	Fayetteville.....	14,200	400
Florence Mills.....	Forest City.....	4,000	
Franklinville Mfg. Co.....	Franklinville.....	2,200	30
Randolph Mfg. Co.....	Franklinville.....	1,900	52
Gastonia Cotton Mfg. Co.....	Gastonia.....	12,000	
Minneapolis Mfg. Co.....	Gibsonville.....	1,300	64
Goldboro Cotton Mill.....	Goldboro.....	3,400	
Belmont Cotton Mills.....	Graham.....	2,592	126
Onida Cotton Mill.....	Graham.....	4,400	257
Sidney Cotton Mill.....	Graham.....	900	72
Granite Falls Mfg. Co.....	Granite Falls.....	3,000	
Crown Mills.....	Greensboro.....	6,000	
Oak Hill Hosiery Mill.....	Greensboro.....	576	
Harden Mfg. Co.....	Harden.....	2,050	
Granite Mfg. Co.....	Haw River.....	8,475	434
*Thos. M. Holt Mfg. Co.....	Haw River.....		96
Henrietta Mills.....	High Point.....	21,000	600
Empire Plaid Mills.....	High Point.....		112
Virgin Cotton Mills.....	Huntersville.....	2,000	
Oakdale Mfg. Co.....	Jamesstown.....	5,000	
Joneshoro Cotton Mills Co.....	Joneshoro.....	2,300	
Enterprise Mills.....	King's Mountain.....	2,688	
King's Mountain Mfg. Co.....	King's Mountain.....	5,000	40
Laurel Mills.....	Laurel Hill.....	650	
Ida Yarn Mill.....	Laurel Hill.....	3,024	
Richmond Cotton Factory.....	Laurel Hill.....	2,500	
Leaksville Cotton Mills.....	Leaksville.....	4,200	
Wenonah Cotton Mills.....	Lexington.....	3,750	206
Elm Grove Cotton Mills.....	Lincolnton.....	3,500	
Laboratory Mills.....	Lincolnton.....	5,500	
Delma Cotton & Wool Mills.....	Lincolnton.....	1,500	
Wilson's Cotton Mills.....	Lowell.....	5,000	
Providence Cotton Mills.....	Maiden.....	15,000	320
Union Cotton Mills.....	Maiden.....	5,000	
Manchester Mills.....	Manchester.....	2,000	
Long Island Cotton Mills Co.....	Monbo.....	2,020	
Monbo Plaid Mills.....	Monbo.....	900	43
Monroe Cotton Mills.....	Monroe.....	8,000	

Name.	Location.	Spindles.	Looms.
Danabaw Cotton Mfg. Co.	Mountain Airy	3,300	
Alpine Cotton & W. Co.	Mountain Airy	1,000	35
Hambur. Mfg. Co.	Mountain Airy	750	
Laurel Blue Cotton Co.	Mountain Airy	3,122	30
Albion Mfg. Co.	Mountain Airy	2,000	
Mountain Holly Mills	Mountain Airy	2,700	
Kims Mfg. Co.	Mountain Airy	6,712	
Tuckasegee Mfg. Co.	Mountain Airy	6,000	
Mountain Island Mills.	Mountain Island	16,000	100
Newton Cotton Mills.	Newton	3,600	
Willard Mfg. Co.	Orange Factory	1,000	72
Patterson Cotton & Wm. Mills.	Patterson	2,600	70
Pineville Cotton Mills Co.	Pineville	5,000	
Caraleigh Mills Co.	Raleigh	4,000	176
Caraleigh Cotton Mills.	Raleigh	6,102	
*Pilot Cotton Mills.	Raleigh	5,000	175
Columbia Mfg. Co.	Ramseur	4,310	112
Naomi Falls Mfg. Co.	Randleman	5,000	200
Plainsville Mfg. Co.	Randleman	2,500	193
C. C. Randleman.	Randleman	1,800	78
Randleman Mfg. Co.	Randleman	5,288	300
Reidsville Cotton Mills.	Reidsville	6,104	
Greene Fall Mfg. Co.	Rockingham	4,288	134
Ledbetter Mfg. Co.	Rockingham	2,008	
Midway Mills.	Rockingham	2,000	
Pee Dee Mfg. Co.	Rockingham	4,032	180
Robberdel Mfg. Co.	Rockingham	5,000	250
Rocky Mount Mills.	Rocky Mount	14,112	
Arista Mills.	Salem	5,184	180
Vance Cotton Mills.	Salisbury	10,000	
Salisbury Cotton Mills.	Salisbury	11,000	400
Saxapahaw Cotton Mills.	Saxapahaw	5,000	
Belmont Cotton Mills.	Shelby	4,500	
Laura Glenn Mills.	Shelby	4,400	
Dixon Mfg. Co.	Snow Camp	476	9
Stanley Creek Cotton Mills Co.	Stanley Creek	2,050	
Swenson Mills.	Swensonville	3,050	152
Staley Cotton Mill Co.	Staley	1,000	
Tarboro Cotton Factory.	Tarboro	8,000	
Taylorsville Cotton Mfg.	Taylorsville	720	24
Tarboro Cotton Mfg.	Tarboro	1,200	
Wadesboro Cotton Mills Co.	Wadesboro	4,000	
Wilmington Cotton Mills.	Wilmington	7,600	227
Wilson Cotton Mills.	Wilson	7,150	
Worth Mfg. Co.	Worthville	11,215	310

The Cost of a Cotton Mill.

Through the courtesy of Messrs. Lockwood, Greene & Co., the well-known mill engineers, of Boston, we are enabled to present the figures given below, which show the approximate cost of a complete plant for the production of standard sheetings, shirtings and drills, with an average of about No. 13 yarn, containing 10,000 spindles.

It must be understood, of course, that these figures are not absolute, because in

operatives. In other places only a portion of them would be required.

A New Railway Head.

The Fall River Machine Co., of Fall River, Mass., has recently brought out a new railway head to be used as a coarse drawing with the English or coiler system of carding. This machine is built with either one or two deliveries on one head, as the users may wish, but the two deliveries on one head is most desired on account

to any distance between the back roll and sliver guide as desired. The frame is built to run a $1\frac{1}{4}$, $1\frac{3}{8}$ or $1\frac{1}{2}$ -inch front roll, as may be desired. The metallic patent rolls are furnished in any size ordered. The top rolls have bushings on ends to act the same as shell rolls in either case. The roller stands are made to open for any length staple of cotton from seven-eighths to two and one-half inches.

The coiler is simple in design. It is geared from the calendar roll with the upright shaft to the bottom table. Instead of

usual, operating 5,000 spindles and 200 looms. A Denn warper has lately been placed in the plant, and arrangements are now being made to replace 500 of its old spindles with new improved ones. The officers of the company are S. G. Newlin, president; S. Bryant, treasurer, and A. Gregson, superintendent. Mr. Bryant furnished us the above information.

THE cotton mill of the Randolph Manufacturing Co. at Franklinville, N. C., has lately been improved by the addition of a Kitson opener and lapper, cloth folder and steam calender from the Lowell (Mass.) Machine Shop. This plant turns out sheetings and yarns, operating 1,900 spindles and fifty-two looms. The officers are John D. Williams, president, and Hugh Parks, treasurer.

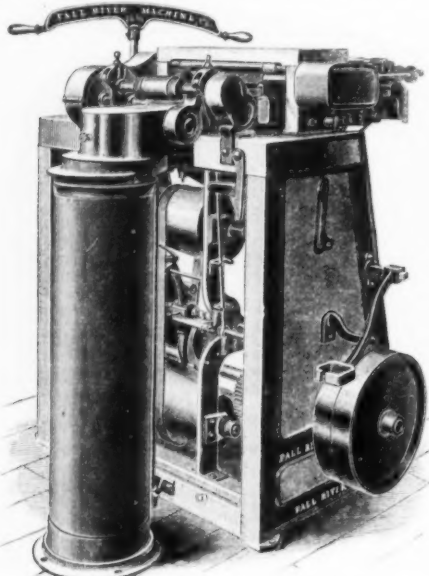
THE stockholders in the Kershaw County Manufacturing Co., now building a cotton mill at Camden, S. C., held a meeting last week and changed the name of the concern to the Camden Cotton Mills. They also increased the par value of the company's shares from \$10 to \$50 and its capital stock to \$200,000. President Carrison will visit the North to purchase the equipment of machinery for the plant.

A LARGE hosiery and wool-scouring mill is now in course of erection at North Galveston, Texas, at a cost of \$25,000. The building is to be two stories high, and is now rapidly going up and the equipment of machinery is being placed. The plant will be operated by the North Galveston Hosiery & Wool Scouring Co., which company has recently been incorporated by F. R. Chase and L. M. Houghton, of Minneapolis, and E. H. Porter, D. R. Beatty and J. F. Nadeau, of Galveston.

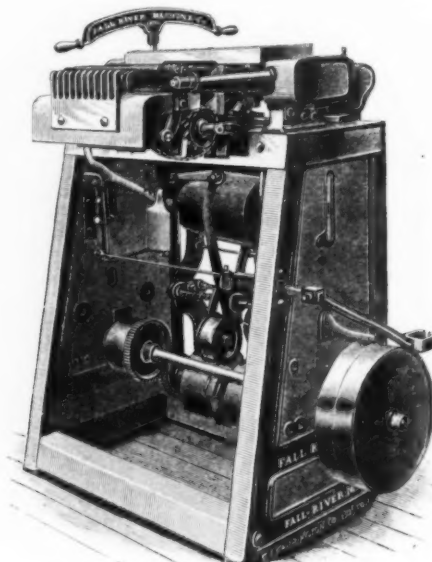
THE Arista Mills, of Salem, N. C., manufacturers of sheetings, shirtings, warps, yarns and cottonades, have recently put in two Whittin frames, gravity spindles, one Pratt quilter and warping machinery, all new machinery. This plant operates 5,000 spindles and 180 looms and is owned by Messrs. F. & H. Fries.

THE Armstrong Knitting Mills at Charlottesville, Va., intend to increase their capacity by 100 dozen shirts daily, and have already ordered additional machinery for the purpose. An increased demand for the plant's product necessitates these improvements.

THE Co-operative Town Co., of Elizabethton, Tenn., has closed a contract with a firm of experienced and reliable cotton manufacturers for the immediate erection of a new cotton spinning mill, which



SINGLE RAILWAY HEAD—FRONT VIEW.



SINGLE RAILWAY HEAD—BACK VIEW.

every locality the circumstances are so varied that no absolute standard of cost can be fixed. The figures, however, will be near enough for all practical purposes.

It is assumed that the mill is to be erected in the South, where building material is comparatively cheap, while the expense for freight on machinery, etc., will be quite high:

Mill buildings complete, including chimney	\$15,000
All other outside buildings	5,000
Steam plant complete, including boilers, engines, pumps, complete foundations and all connections	25,000
Shafting, complete and erected	8,000
Machinery proper	110,000
Supplies, furniture, etc.	10,000
Freight on machinery, supplies, etc.	9,000
Heating and ventilating apparatus, complete and erected	2,500
Lighting apparatus, complete and installed	3,000
Fire protection complete, including sprinklers, tanks, etc., erected	3,000
Elevators and repair-shop tools	5,000
Starting mill	10,000
Contingencies	10,000
Total	\$240,000

of the economy of floor space. This frame is built with coiler for any size of can. For a heavy sliver from the card they put ten cans or ten doublings back of the frame and deliver into one on the front side of the frame or head. For the second doubling they double six into one, and the third doubling the same, making 360 doublings with this system, whereas by the English system only 216 doublings can be obtained. Besides this system has the advantage of the evenner, which the English system does not have.

This frame is built with automatic stop motion to prevent any possibility of less than the intended doubling running through the roll, for the knock-off motion will throw the shipper and the frame will stop within five inches of the guide after the sliver breaks or runs out of the can. The dis-

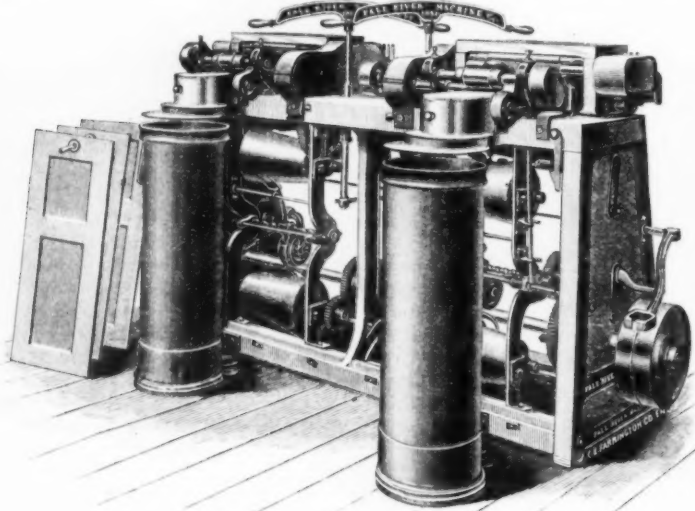
a nest of gears this machine has only a worm and worm gear, making it less complicated and reducing danger of breakage.

These heads are now running in the following mills: Slater Cotton Co., Pawtucket, R. I.; Weetamoe Mills, King Philip Mills, Stevens Manufacturing Co. and Barnaby Mills, Fall River, R. I. The makers have duplicate orders from several of these mills and new orders from others.

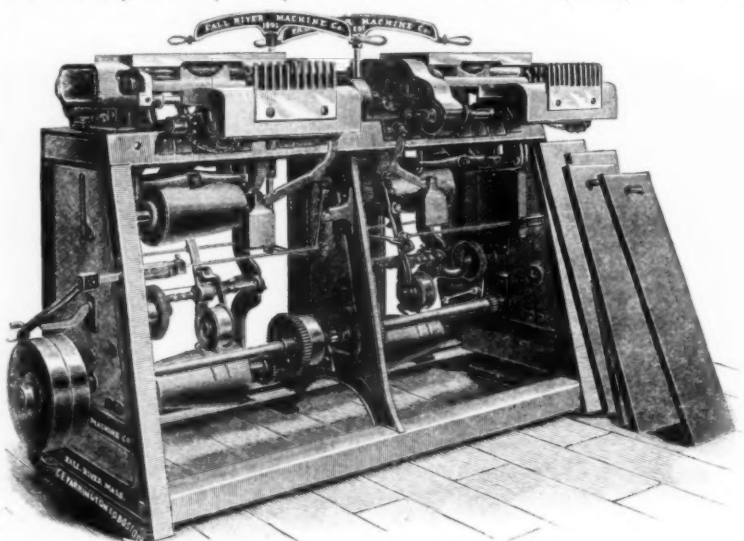
Southern Textile Notes.

ARRANGEMENTS will be made for resuming operations this month at the Pulaski Knitting Mills in Savannah, Ga. Capt. Wm. W. Williamson is president of the company.

THE new knitting mill at Enterprise, Miss., mentioned last week, will be established by a company which has lately been formed with John Kamper as president.



DOUBLE RAILWAY HEAD—FRONT VIEW.



DOUBLE RAILWAY HEAD—BACK VIEW.

This estimate does not include any expenditure for land or tenements for operatives. This is so uncertain a feature that it is not safe to make an estimate.

In some locations it would be absolutely necessary to erect all the tenements for the

tance from the back roll to sliver guide being 14 inches, it allows plenty of sliver to piece up. To prevent any danger of the sliver being stretched or drawn there is a pair of idler rolls connected with the back roll by a side shaft, that it may be adjusted

Complete outfit of machinery has been purchased, and the plant will be in operation by March 1st.

THE Naomi Falls Manufacturing Co., of Randleman, N. C., manufacturer of plaids and seamless bags, is running in full as

guarantees to employ from 130 to 150 hands. Work on this mill will be commenced at once, and it will be in operation as soon as the buildings are finished. The buildings will be of brick, and number in all four. The main building will be 250 by 50 feet,

with two wings, each fifty by forty feet, and a warehouse 150 by 50 feet. All the machinery will be new and of the latest make.

THE Minneola Manufacturing Co., of Gibsonville, N. C., is building an addition to its cotton mill two stories high, 121x50 feet. The plant turns out plaids, yarns and checks, and is operating 1,300 spindles and sixty-four looms, but upon the completion of its new building sufficient machinery will be put in to double its capacity. B. Davidson is president of this concern, and J. A. Davidson, secretary and treasurer.

THE Bamberg (S. C.) Cotton Mills, the Henrietta (N. C.) Mills and the Mark Morgan Co., of Laurel Hill, N. C., have ordered their cotton lappers and openers from the Potter & Atherton Machine Co., of Pawtucket, R. I.

THE Georgia Manufacturing Co., of Athens, is getting ready to commence the erection of its new mill building. The grounds are being cleared off and prepared for the digging of the foundation. This new plant is to replace one recently burned.

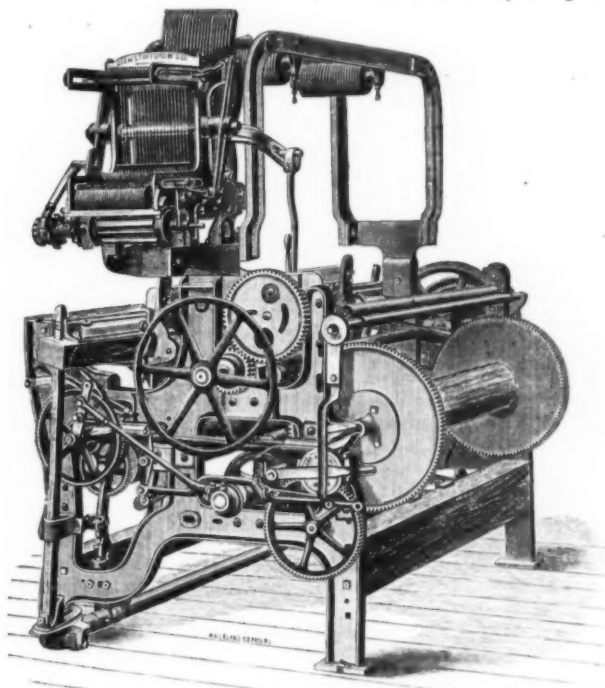
THE large new knitting mill of Messrs. Rishton & Co., at New Berne, N. C., turned on steam last week and worked successfully. This enterprise has progressed to completion with great rapidity.

THE Langley (S. C.) Manufacturing Co. has its mill in full operation as usual, operating 15,000 spindles and 410 looms. This plant produces sheeting, shirtings and drills, and under the management of

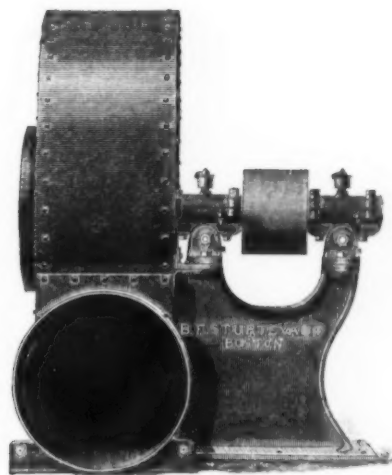
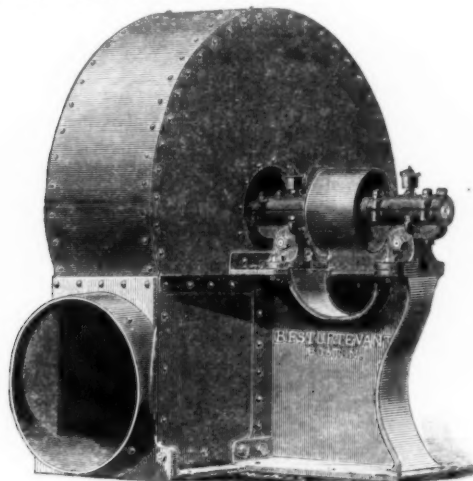
it, by means of the filling fork, the moment the filling breaks. A positive "let-off" motion, improved "take-up" and patent tape selvage motion" are other important points.

number of picks, thus being easier on the warp and of great advantage for speed, especially with tender yarn.

The demand for novel and odd patterns has caused a corresponding demand for



THE IMPROVED STAFFORD LOOM.



THE STURTEVANT EXHAUST FAN FOR HANDLING COTTON.

Thomas Barrett, Jr., of Augusta, Ga., who is its president and treasurer, has enjoyed considerable prosperity. Arthur T. Smith is superintendent of the mill. It is said that its capacity will be doubled in the near future.

The Improved Stafford Loom.

At the recent Mechanics' Fair, held in Boston, manufacturers were greatly interested in this new loom, and carefully investigated its merits. From a mechanical standpoint it was considered a most excellent piece of machinery. The pattern then being woven required the use of nineteen harnesses and the speed averaged 165 picks per minute. This is something remarkable, and the number of harnesses alone was greater than the common loom can handle at a high rate of speed. It is possible to work twenty-five harnesses in this loom, and, as but one shuttle is used on each side, it is possible to weave the most complicated patterns.

One feature which immediately attracts the attention of a manufacturer is the small floor space required for a twenty-five harness loom. In mills with limited floor space available this is a most important item, as the loom in question requires no more space than an ordinary cotton loom. Another prominent feature of the loom is the automatic brake which instantly stops

every pick, but can remain open for any

looms capable of weaving them, and the builders of this machine, the George W. Stafford Manufacturing Co., of Providence, R. I., have endeavored to produce a machine in every way suited to such work and in so far as results show have suc-

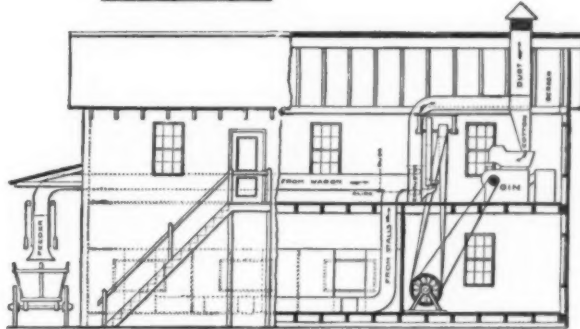
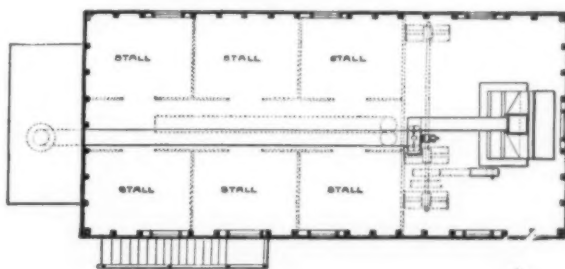
ceeded. The best of material is employed in the construction, and the work is done only by men who have the ability and experience necessary in the making and erection of such accurate machinery.

The Sturtevant Exhaust Fan for Handling Cotton.

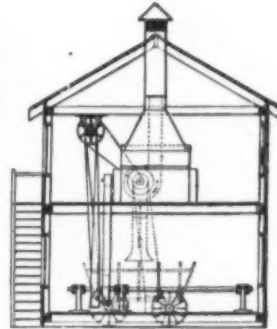
The accompanying illustrations show the patent steel-plate exhausting fan, specially constructed for elevating cotton, cottonseed, hulls, etc., by B. F. Sturtevant, Boston, Mass., and also its application in the ginhouse for handling seed cotton. These exhaust fans have ball bearings on one side so as to give an unobstructed inlet for cotton or other fibrous material. The blast wheels are so constructed that there is no possible opportunity of the material catching inside and clogging the machine. These fans are made with the pulleys either on the right or left-hand side, as desired.

The rapidity, convenience and economy of raising cotton, cottonseed, etc., by means of an exhaust fan has been repeatedly and conclusively proven. As an elevator alone it is, for such material, superior to any other form, and in addition it aids in cleaning and drying the cotton, a point which is much in its favor. The rapid action of the fan blades and the continuous current of air passing through the machine thoroughly beats the cotton, removing dust and preventing any wads or packs from passing to the storeroom or gin. Consequently the quality of cotton coming from the gin is improved and the capacity of the gin increased.

Another important feature is the avoidance of danger from fire. There is no friction which could create a spark, and as everything is enclosed, should a fire start in one portion of the building it could not be communicated to other parts unless it should have commenced where the suction was and spread so rapidly that the machine could not be stopped. For safety in this respect it is superior to all other arrangements. The saving in labor which this method of handling permits makes ample and prompt returns for the expenditure in equipping the gin. Mechanical appliances of this kind are of the utmost importance in reducing the cost of ginning and handling seed cotton. At most gins the elevator has superseded the old-time method of handling in baskets, and this pneumatic system is now largely replacing



ARRANGEMENT OF THE STURTEVANT COTTON ELEVATOR.



the elevator because of its manifest superiority. The makers recommend that the feeder should be placed as near the fan as possible, or, if necessarily placed at some distance, the pipe should be of sufficient size and free from sharp bends.

SOUTHERN OUTLOOK AS VIEWED BY BUSINESS MEN.

What Leading Merchants Think of the Prospects in the Carolinas and Georgia.

For the purpose of ascertaining accurately and definitely how Southern business men regard the situation, the MANUFACTURERS' RECORD has requested expressions of opinion from about 600 of the largest houses in the South, covering all the States and including every line of business. The replies that have been received form an exceedingly interesting symposium, which renders easy an insight into the true condition of business in the South. The first instalment of these views is given below, the Carolinas and Georgia having been chosen as bearing the most intimate relation to the leading feature of the present issue—the cotton manufacturing industry of the South.

Improvement Due to Politics and Cotton.

CHARLOTTE, N. C., November 21.

Since the presidential election there has been a much better feeling in the South, owing to two things—first, the feeling that under Cleveland's administration the South will not be discriminated against as it has been, and secondly, the advanced price of cotton is now bringing. We think the business outlook is very favorable, and unless something unforeseen happens, we think that in 1893 the South will have one of the most prosperous years it has ever had.

BROWN, WEDDINGTON & CO.,

Hardware Importers and Jobbers.

Something in Store for Everybody.

CONCORD, N. C., November 28.

Our farmers for two years have made grain plenty for all requirements and to spare, and have used rigid economy, which puts them in much better condition this fall than usual. The advanced price on cotton will help to swell their purses and make them, as well as business men, feel like there is something in the future for us all. The greatest misfortune is that almost all of the cotton in our immediate section has been sold.

YORKE & WADSWORTH,

Hardware, etc.

Prospects Good for Healthy Business.

GREENSBORO, N. C., November 19.

This immediate section produces very little cotton; our farmers raise grain and tobacco. Crops the past season will average fair. Our bankers, merchants and farmers, as a rule, have pursued a conservative, economical and cautious policy; hence, we think this section is in good shape, and the prospects good for solid, steady improvement, and active, healthy business with both merchants and manufacturers.

J. W. SCOTT & CO.,

Jobbers.

Farmers Are Raising Their Supplies.

HENDERSON, N. C., November 21.

There is already a general improvement in business in this section of country, as a result of the election and advance in prices of cotton and tobacco. There is a better feeling among the people generally. The farming class of people have seen the error of their way and have begun making their home supplies. Instead of buying their hay, corn, flour, meat, etc., from the West, they will raise them at home. This, together with rigid economy, will make a bright and prosperous future for the South.

THE LANSITER-PARRAM CO.,

Merchants and Cotton Brokers.

Improvement Has Been Very Marked.

NEW BERNE, N. C., November 25.

The improvement in business since the election has been very marked. Cotton sold here to-day for nine and a-half cents for middling, which is an advance of over two cents per pound. The business men and farmers as a rule all seem very much encouraged, and think that a bright and

prosperous era is about to dawn on the South. With good spring and fall crops in 1893, and fair prices for the products of the farms, this section will certainly come to the front.

HACKBURN & WILLETT,

General Merchandise.

A Cheerful Feeling.

RALEIGH, N. C., November 21.

There seems to be a cheerful feeling about the business outlook, and the impression is that there will be a general improvement from now on.

WILLIAMSON & UPCHURCH.

Not an Encouraging Outlook.

WILMINGTON, N. C., November 22.

The business outlook as reviewed by us at this date is not very encouraging. The recent advance in cotton has caused more activity in trade, but there is not enough of it in this section to relieve the producers of debt, and hence they will necessarily begin the new year under the disadvantages of a part of last year's indebtedness. It can be said, on the other hand, however, that this crop, though a short one, has been made at much less than the usual expense, especially for fertilizers, and should the same course be pursued another year and an average crop be raised at a similar expense, we think it would relieve most of the farmers of debt and result in great improvement in general business.

HALL & PEARSALL,

Wholesale Grocers.

Prosperity Will Be Magnificently Demonstrated.

WINSTON, N. C., November 25.

We are now encouraged at the hopeful outlook for business in the South, especially since the "Force Bill," the greatest menace to our harmony and prosperity, has been forever buried. There is no doubt but that all the crops in the South have been made for at least one-third less this year than ever before. It is also a fact that the whole South has made at least 50 per cent. more supplies than ever before. It is further very evident that it is the idea of the South to maintain diversified farming. It is therefore evident that the immense amount of money received for the cotton crop, instead of being sent North and West for supplies, is, to the above extent, to be kept at home, and when this system is thoroughly inaugurated, as it soon will be, the South is independent of the world, and will in the next decade stand where she did in ante-bellum days, the autocat of the American continent. The past two years have been a boon to our people. It has been an education to them. They have about graduated, and the prosperity that always follows the enlightenment of a people will be magnificently demonstrated in the next few years in the South. Therefore all we, as a people, need that we are not abundantly able to supply ourselves is cheaper money. While we believe in a stable and permanent currency, we do not believe in appreciating a dollar beyond its just and actual value.

P. H. HANES & CO.,

Tobacco Manufacturers.

Outlook Better Than Last Year.

ANDERSON, S. C., November 25.

We regard the present outlook for business in our section and the South generally very much more favorably than at this date last year. The farmers have produced the present year's crop probably cheaper than for many years, and are consequently less in debt; they have paid up pretty well for this year's supplies, though still owe considerable for past indebtedness, which, notwithstanding the late advance in cotton, they will not be able to pay this season, considerably over half the cotton crop

having been marketed before the advance. Our newspapers in the South all seem to think things look better both financially and politically, and they about express our views. Our cotton crop is perhaps 33½ per cent. short of last year.

SYLVESTER BLECKLEY CO.,

Cotton Merchants.

More Manufacturing: Less Agriculture.

CAMDEN, S. C., November 26.

Though the money crop (cotton) of the South is small this year and business depressed at the opening of the season, the recent advance has brightened things, and we look for a very prosperous season next year. We are certainly becoming each day more of a manufacturing State, and several new enterprises are under way in our immediate section. This will make us less dependent on agriculture. Cleveland's election and freedom from apprehension in regard to the "Force Bill" give a sense of security to all Southern properties, nearly all of which are higher than a month ago. This will induce Northern capital to invest here. We candidly believe the development of South Carolina is about to commence in earnest, not with the rush and boom of new Western States, but surer and more solidly. With properties at their present value \$1.00 must soon become \$2.00. We are not enthusiasts—we have quite the contrary reputation—but we are becoming every day more satisfied with any Southern properties we are interested in.

SPRINGS, HEATH & CO.,

Bankers and Merchants.

Trade Is Much More Settled.

CHARLESTON, S. C., November 24.

In the section tributary to us, we think that the condition of the trade is much more settled than it was at the same time last year, and the outlook for business is better. The recent advance in the price of cotton, while it has not, unfortunately, benefited our farmers, to whom it would have proved of the greatest value, owing to the fact that the bulk of their crop has passed out of their hands, nevertheless is a source of encouragement to them, as they can reasonably expect to realize more profitable figures for the staple the coming season than they have done for the past two years. The conditions were such last spring that the farmers generally practised, from absolute necessity, the greatest economy, planted more largely of provisions, and the result is that they owe practically less money on this year's crop than they have done on any previous crops for some time. This, in addition to the generally fine provision crops, has placed them much nearer to a self-sustaining basis. If they will pursue the same economy the coming year, using more largely of fertilizers, so as to get a greater yield from the land they cultivate, we believe that the South will recover from the depression more quickly than almost any other section.

ROBERTSON & TAYLOR,

General Managers Ashpoo Phosphate Co.

Cotton Will Only Repay Advances.

CHARLESTON, S. C., November 23.

The advances on the crop will be fairly paid up, but little or nothing will be left to go on last year's balances. The high price of cotton and the short crop (provision crops being good) will induce larger planting next spring, and therefore there will be more business. There is very little cash in the South, and most of next year's business must be done on time. The election of Mr. Cleveland and the advance in cotton have assisted in producing a very much more hopeful and cheerful feeling.

E. H. FROST & CO.,

Factors and Commission Merchants.

Business Has Been Dull.

CHARLESTON, S. C., November 23.

Business for the past twelve months has been quite dull in our line, but the recent rise in cotton will no doubt cause a better

feeling and lead to more business in the spring. VALK & MURDOCH IRON WORKS.

Good Trade and Few Failures.

COLUMBIA, S. C., November 23.

Things look decidedly brighter and more hopeful in this section. Trade is right good, and, following a very conservative policy for the past twelve months, we think there will be but few failures comparatively. The election of Democratic leaders has given a brighter countenance to our people, and, politics being out of the way, there is nothing to do but go to work and better their financial condition. There is more confidence and money and credit will be more available, and with a continued conservatism, which we have no doubt will be practiced, and better prices for our leading staple, we look with confidence to the future.

LORICK & LAWRENCE,

General Merchants.

Business Has Brightened Up.

GREENVILLE, S. C., November 23.

We think the people generally in our section are feeling much brighter since the overwhelming majority of the Democrats, and, about the same time, the advance in cotton, which is our money product in this section. Business has brightened up considerably, and we think the outlook for the future of this section very much improved. If our leader will only be conservative and considerate, we think this section will, during Cleveland's administration, improve very much. We have many fine openings for investments, which we hope will come.

WILKINS, POE & CO.,

Hardware, etc.

Trade Dull and Money Scarce.

ORANGEBURG, S. C., November 23.

Trade is very dull and money very scarce on account of low price of cotton. Cotton is nearly all gone out of the country, and therefore there is nothing to improve prospects until another crop is made and prices of cotton keep up.

GEO. H. CORNELSON,

General Merchant.

A Prosperous Season Anticipated.

SUMTER, S. C., November 26.

The stringency in money matters throughout this section seems at present to hamper business, but the feeling of encouragement engendered by the triumph of the Democratic party, followed by a rise in cotton, is marked to a degree, and many enterprises which seemed to be languishing have taken on new life. In short, so far as my views can go, I anticipate a prosperous season and to see all lines of business put on their former good footing. From the past record of your valuable journal, those who know it confidently expect you to do glorious work in spreading encouragement to (lately) an almost discouraged South.

H. B. BLOOM,

Cheraw Machine Works.

Trade Is Better and Still Improving.

AMERICUS, GA., November 23.

Trade is better in this section than it has been for two years past, and is steadily improving. With the advanced price of cotton and the election of a president friendly to our section, we think the prospect of a continued improvement quite flattering.

LEE ALLEN & CO.,

Clothing Dealers.

Higher Cotton and Easier Money.

ATHENS, GA., November 23.

Trade and business generally through our section are much better than last year, due to improved price of cotton and freer and easier money. Collections are reported better than for some years and few failures are reported. Farmers are in better condition, due to having raised provisions, principally corn, to a larger extent than for many years. The cotton acreage was thereby reduced, and a larger proportionate reduction in the use of fertilizers produced short cotton and higher prices.

R. L. MOSS & CO.

Southern Prosperity an Assured Fact.

ATLANTA, GA., November 23.

It is our candid opinion that Southern trade prospects are exceptionally bright; in fact, they were never brighter. As is natural, the Democratic administration has inspired confidence in the local (Southern) commercial men and capitalists. They are now more certainly assured of prosperity, and can with better grace and more substantial vim solicit Eastern and foreign capital for the South, and the capitalists in their turn are more ready to make investments when solicitors are confident in abundance.

Our line of goods is considered by the general business public as an office luxury and not an office necessity, and more than anywhere is this apparent in the South. We are now prepared to say there is an increased demand for our goods with exceptionally bright prospects. We hold that if a man considers that he has money to spend in luxuries, the staple sellers and general merchandise houses must be in a healthy condition from a business standpoint.

We also find that buyers are asking less time for payment on goods, and take up their paper more promptly as it comes due.

We reiterate the opinion that Southern prosperity is an assured fact, and that Eastern and foreign capital invested here and endowed with good management will be a paying investment.

OFFICE SPECIALTY MANUFACTURING CO.

H. B. Howell, Manager.

Steady Rapid March of Material Development.

ATLANTA, GA., November 26.

The granaries and smokehouses of the South are fuller than they have been since the war; there are greater numbers of cattle, horses, sheep and hogs being raised. In a word, our farmers are nearer self-sustaining than they have been in years. They are less in debt, and are getting about \$100,000,000 more than usual for their cotton and sugar crops. Without fear of "Force Bills" or other unfriendly legislation, and feeling that the war is over forever, and that we have been affectionately and lovingly embraced by the great North and West, we must have a period of rapid and prosperous development. We must have wonderful progress in this region, even if our brothers of the North and West, who have so signally shown that they are our friends and brothers, should not bring down a part of their surplus. The English and Germans and Scotchmen are wide-awake, and have already established direct lines of steamers with several of our Southern ports, and are putting their capital into the development of our mines, forests and water-powers.

Yes, I predict a steady and rapid march of material development.

A. J. McBRIDE.

Going to "Get There."

ATLANTA, GA., November 23.

We think the business outlook in the South for the coming year is much better than it was a year ago. We are receiving offers of business, and people with whom we deal seem to be quite hopeful of the future, and much more inclined to engage in new enterprises than they were a year ago. The losses on the cotton crop last year, together with the low prices of iron, lumber, etc., bore heavily on the people generally, but the farmers have scratched through the season without getting in debt much, and as cotton, iron, etc., are advancing, people generally are taking a more hopeful view of affairs and planning for a larger business the coming year. These things, and the settlement of political matters for some time to come, have had a very beneficial effect on the South generally. Real estate here is stiff and advancing. A year ago it was at a standstill. In a word, we are hopeful and courageous, and are going to "get there." J. A. BURNS, President Burns Manufacturing Co.

Prospects Are Very Good.

CARROLLTON, GA., November 22.

While crops are short, still the country seems to be in a somewhat prospering condition from the fact that the farmers have not traded very heavily, and our opinion is that prospects for business in the future is very good. ASKEW, BRADLEY & Co., General Merchandise.

Trade Quiet, but Conditions Better.

COLUMBUS, GA., November 21.

The condition of our section at this time is rather uncertain, as it is next to impossible for us to find out with any degree of accuracy how much cotton remains in the hands of planters unsold. We know that they are holding back some for higher prices, and we also know that the grain crops of our section are the best we have had in years, which will enable us to make our next crop with but small cost; and then, if we can only realize a fair price for it, our condition will be all that we could ask. This, however, is not appropriate at this time, as it is their present condition you want. Our merchants have been very conservative during the past year, and most of them report fair collections. We have had no important failures as yet. Our banks have ample funds for all good, solvent concerns, and while trade is rather quiet at this time, we see nothing alarming in the situation, and believe that we are in better condition now than we were one year ago. Our people are in much better spirits since the election, and believe that the administration of Mr. Cleveland will be satisfactory to the entire country, and so far as the South is concerned, we do not ask for more prosperity than we had during his first term in office. CARTER & BRADLEY.

Cotton Factors.

Consumers Buying More Freely.

COLUMBUS, GA., November 23.

Business in our section for the past year has been very much depressed. We attribute same to short crops, prevailing low price of our leading commodity, cotton, and the usual excitement incident to a political campaign. Now that the political contest is over, coupled with the recent advance in cotton and seasonable weather, an impetus has been given to business. There seems to be a general feeling of confidence, and consumers are buying more freely than for some time. We regard business generally in a healthy condition, and the outlook for the future promising. LEWIS & GREGORY,

Wholesale Dry Goods.

The Outlook Very Promising.

FORT VALLEY, GA., November 21.

The success of the Democratic party in electing Mr. Cleveland as the next President of the United States and in gaining power in our national government has very naturally inspired confidence. We believe the threatened sectional legislation which gave promise of trouble and disaster to our Southern industries is averted. We are hopeful and confidently look for increased prosperity in our section of country. The small cotton crop of the present year is really a blessing in disguise, as the wants of the world will wipe out the large surplus of cotton accumulated the past few years, thus insuring to our cotton-growers a remunerative price for their staple product for a number of years to come, even though they should produce large crops, as it will require several large crops to again accumulate such a large surplus as was on hand first of last September. Altogether we regard the outlook for the future as very promising.

HOUSTON GUANO & WAREHOUSE CO.

Farmers Are Paying Their Debts.

GRIFFIN, GA., November 25.

We think this section of the country in better shape than this time one year ago. Farmers generally are paying this year's

debts pretty well, and prospects for the future seem brighter.

J. D. BOYD & SON, Cotton Warehouse.

Merchants Are Selling More Goods.

MACON, GA., November 21.

The election of Cleveland and the advance in cotton have given renewed life and encouragement to both the mercantile and agricultural interests in the South. Merchants are selling more goods and collections are satisfactory. Great economy and caution have been the watchword, and very few failures have occurred. The farmers as a rule are in good condition, having made an abundance of food crops. The future is indeed bright and more hopeful. L. B. ENGLISH & Co.,

Cotton Compress and Warehouse.

Farmers Are Buying for Cash.

MACON, GA., November 21.

The outlook seems better; there is more confidence in our section. The farmers having made the present crop on greatly reduced expenses, will start the next in better condition. The large cotton surplus will be wiped out by the short crop of this year, and on account of the growing consumption, our great staple will command a remunerative price next season, although we should make a very large crop. Collections have been good this fall, and our merchants will commence the next season in good shape. The farmers, having full crops, will require less advance and will buy more for spot cash. Our banks seem inclined to take all good paper, but are exceedingly conservative. New enterprises are in contemplation, and will probably soon be undertaken. The tight times of the past two years are about ended. If our farmers will stick to the rigid economy of the past year, and if our merchants and business men generally will preserve a careful and conservative course (and we believe they will do so), we can naturally expect a brighter future. W. A. DAVIS & Co.,

Cotton Factors.

Cotton States Recover Quickly.

MACON, GA., November 21.

The outlook for the South is very encouraging. Our people are living as close as they can. Our cotton for the two last years was sold without profit, but now prices are getting on a basis that makes us cheerful. September, 6½; November, 8½, means \$80,000,000 to the cotton growers. No country on earth can recover sooner than the cotton States from depression. JOHNSON & HARRIS,

Wholesale Grocers.

Millions Will Flow South for Investment.

MACON, GA., November 21.

The vast and diversified industries of the South are yet practically undeveloped. We believe this is due in a large measure to the unfriendly national legislation in recent years; that with a change of administration, a vigorous reduction of the tariff and pension list, which, through selfish and political motives, have grown to abnormal proportions, a readjustment and equalization of our national currency and a wise and economical public expenditure, confidence will be restored, and as a result millions of dollars will flow into the South seeking investment, which will necessarily quicken trade and give a fresh inspiration to all and present industries. Already a better state of feeling seems to have taken complete possession of all our people.

BURDEN, SMITH & Co.,

Dry Goods.

The South Will Grow and Prosper.

MACON, GA., November 21.

Business has been slack and money rather tight, owing to confidence being somewhat destroyed and overproduction of cotton, hence low prices. Should the money market be kept tight I dare say in two years our farmers would be far better off, as it would mean less cotton, more hog

and hominy and better prices. Since the 8th inst. confidence has been restored, money matters easier and collections good. Although things have not been bright for past three years, we can see no reason why business will not brighten up and the South grow and prosper for the next four years. There will be stacks of Northern money placed down here, and a great many good Northern people move in who will infuse new life in this glorious old South of ours.

HENRY STEVENS'S SONS,

Sewer Pipe and Fire Brick.

Brightest Outlook in Ten Years.

MARIETTA, GA., November 21.

I think that I see a brighter outlook for business in the South than I have for years, for the following reasons:

1st. The election of Mr. Cleveland and a majority of Democrats to the Senate and House almost insures the repeal of the 10 per cent. tax on State banks. That will give us a local currency and stop us from paying New York tribute on all the business we do.

2d. I think that a revision of the tariff will benefit the South and cause more manufacturing.

3d. I think that the people in the East and Northwest are beginning to find out that we have a mild climate, and the prejudices against the South are less now than they have ever been, and as land is cheap and a great deal of it, I look for more emigration to the South, and especially to this section, in the next ten years than there has been in the last ten.

4th. To sum it all up, I think that I see a better prospect and a brighter future for the South in a business line of every description than I have seen since the war. SARGENT A. ANDERSON,

Marietta Paper Manufacturing Co.

In a Healthier Condition Than for Years.

WASHINGTON, GA., November 23.

In my opinion the South, and particularly our own State, is in a healthier condition than for many years. Since the war our people have given their whole time and attention to the raising of cotton, depending upon the West for all food crops for man and beast. This year they have made their own corn, raised largely of hays, meats and wheat and bought very few goods at high credit prices. They have paid their merchants, and now have more money than they have had in many years. It is to be hoped they will not be led away by the promise of a high price for cotton in 1893, and that whatever the price may be, that they will make all their food crops at home. If our people will continue to do what they have done this year we will be the most prosperous people in the Union, and if we continue to raise our food crops and our own mules and horses, we will be lenders of money instead of borrowers. The more cotton we make the less per pound we get; the less we make the more per pound we will get. Lands in Tennessee and Kentucky at the close of the war were of about equal value with ours in this county (Wilkes). By reason of our bestowal of patronage on them, theirs have quadrupled and ours in a like degree have depreciated. If we live at home and withdraw our patronage from them our lands will appreciate, while theirs will depreciate. Our people, after over a quarter of a century of folly, have at last awakened to a sense of duty, and I hope they will ever keep their eyes open. We can raise as much corn, oats, wheats, rye, barley and hay to the acre as any Western State. We are a favored people, if we could but get ourselves to believe it. In climate, soil, water and all things else we are fully equal to any spot on this continent. We want good, thrifty New Englanders, Western men and good Europeans to come here, and they can make money.

JAS. A. BENSON,

Merchant.

PHOSPHATES.

Phosphates in North Carolina and Alabama.

By Edward Willis.

[From the Eleventh Census: Report on Mineral Industries.]

Phosphates have been known to exist in the State of North Carolina for a number of years, but it was not until 1884 that they were fully examined. In that year Prof. Charles W. Dabney, Jr., of the State Geological Survey, made a thorough investigation and examination and found them to be of two classes: First, amorphous nodules very much resembling those of South Carolina; and, second, conglomerates, in which the pebbles are phosphate and the matrix a white calcareous rock. The first are of poor quality, occurring in small quantities, varying widely in quality of chemical constituents and commercially of little value. Their locality is principally in the southern and southeastern portions of the State, in the counties of Sampson, Pender, Onslow, Duplin, Columbus and New Hanover. In shape the nodules are flat, in this respect differing from those of South Carolina, which appear to have no definite form.

The phosphatic conglomerates consist of a mass of tertiary teeth, bones, nodules and quartz pebbles, in connection with grains of greensand, with which they are cemented together in a calcareous matrix. These conglomerates are found principally in New Hanover and Pender counties. They exist in beds from one to six feet in depth. As the depth increases they grow smaller in size. The largest scarcely exceed in size an ordinary walnut, but at the greatest depth the smallest are of the dimensions of a buckshot. The whole mass of conglomerate does not contain over 10 to 20 per cent. of phosphate of lime. It has been ground by several companies in the State, by whom it is sold to local consumers, who have used it with some success as a fertilizer.

STATISTICS OF PRODUCTION OF PHOSPHATE ROCK IN NORTH CAROLINA IN 1889.

Total product (short tons).....	500
Total value.....	\$5,000
Employees:	
Laborers (number).....	15
Average rate of wages.....	\$0.75
Average number of days employed.....	100
Expenditures:	
Total wages paid.....	\$1,125
Paid contractors.....	500
Paid for supplies.....	2,000
Paid for other expenditures.....	100
Total.....	\$3,725
Capital invested:	
In land.....	\$90,000
In buildings and fixtures.....	500
In tools and machinery.....	5,000
Total capital.....	\$100,000

ALABAMA PHOSPHATES.

In Alabama there is a belt running across the State from east to west just below its middle and included between parallels of latitude 32° and 33°, locally known as the "black belt." In this belt, particularly in the central and western parts, greensand marls and phosphatic nodules have been found which promise fully as well as the Florida phosphates did a few years ago. Some effort has been made to develop these deposits, and the phosphatic marls particularly have been used locally, but the district is not well supplied with transportation facilities at present. The northern boundary is a line drawn from Columbus, Ga., westward through Tuskegee, Montgomery, Marion, Greensboro and Eutaw, Ala., on to Columbus, Miss. The belt extends southward from this line for twenty to fifty miles. In the eastern parts of the State it is covered by the drift to such a depth as to be practically useless. In the central and western part of the State the belt is well exposed. Under a stratum of greensand marl five to six feet thick occurs a sandy, indurated nodular rock two feet thick, cemented by carbonate of lime, which yields from 200 to 800 tons per acre of phosphatic nodules

yielding 20 to 38 per cent. of phosphoric acid.

As soon as the approaching era begins of fertilizing by the application of calcined phosphates directly to the land, these deposits will be great sources of wealth, and a region now little known will in due time be very valuable. No work was done on these deposits in 1889.

Annual Report of the South Carolina Phosphate Commission.

The annual report of the South Carolina Phosphate Commission was issued on Saturday, the 26th inst. Governor Tillman, as chairman of the commission, in making his report refers to the creation of the board of commissioners and the work accomplished. He also referred to the famous Coosaw law suit, and said: "The result of this litigation has been to throw open the rich and extensive phosphate territory heretofore monopolized by the Coosaw Mining Co. The following companies were licensed to mine in the Coosaw territory, to wit: Carolina Mining, Sea Island Mining, Oak Point Mines, Farmers' Mining, Beaufort Phosphate, and Corsaw Mining." In referring to phosphate territory, the governor says: "While the phosphate deposit on Shingle creek is not very valuable, it is typical of a large territory in this State claimed by riparian owners, and an action has been commenced by the attorney-general to settle the right of the State to this and similar territory. Mud creek is a stream similar in character to Shingle creek, but of more doubtful navigability." In speaking of the regularity in the amount of royalty paid by the various companies, Governor Tillman says there is no doubt that by having the dried rock weighed instead of the crude for estimating the amount of royalty to be paid, the State has lost heavily in royalties. This, he says, has been going on for some years. Further on in his report he proceeds thus: "The companies were notified at once that we would claim on behalf of the State the actual difference. We find, however, that the companies are protected against this claim by the action of the board of agriculture for any sums accruing prior to our giving them such notice. We did not deem it wise in the present depressed condition of the industry to force the companies into doubtful litigation. A committee has been appointed to conduct and experiment in the presence of representatives of the companies, to fix, beyond doubt, the actual difference between the crude and dry rock. The test has not been made, the unusual amount of rock on hand filling up all available space in the various drying sheds. An attempt was made in the open air, but was unsatisfactory, and therefore abandoned." The report furnishes details of the annual inspection of the territory, and calls attention to the large stocks of fertilizers on hand, suggesting that companies be stopped from emptying their debris in the phosphate beds. The report concludes with the following summary:

"We found a large amount of rock on hand at all the works, estimated at from 80,000 to 100,000 tons.

"Notwithstanding the fact that the mining operations were conducted outside of Coosaw river during more than half of the fiscal year, the opening of that river to all the companies has resulted in an increase of the total production to figures larger than ever before known. But as the law does not require the royalty to be paid until the rock is shipped and sent to market, the State's income is less than last year. The rock is on hand, but it has not been sold by reason of the low prices now prevailing. Eighteen months ago, or when the Coosaw litigation began, the price of rock was over \$7 per ton. It is now bringing about \$3.50, and the miners, unwilling to sell at these low figures, are piling it up

in the expectation or hope of better prices.

"The present condition of the phosphate trade is very unsettled and the market glutted. There have been previous periods of depression, but from other causes than those which have produced the present low prices. Within the last few years very extensive deposits of phosphate rock, both on land and rivers, have been discovered in Florida, and a large amount of capital has been invested in developing those mines. The rock is of a higher grade than ours, and it is said can be mined much more cheaply, but it has cut a small figure in the markets of the world until within the last twelve months. The Florida miners labor under the disadvantage of having poor shipping facilities, and they are handicapped also by higher freights, but their production of rock has been very large, and this has been thrown upon the market for almost any price it would bring; and while we have every reason to believe that the Florida miners are selling below the cost of production, nevertheless their rock is displacing ours and forcing the price down until the margin of profit has grown very small, and with some of the companies may have disappeared altogether.

"The depression in the cotton market, which has lessened very largely the use of fertilizers, has also entered into the conditions which brought about these low prices.

"While our miners are admirably equipped for raising the rock and handling it, and have the advantage of geographical location, as being nearer the markets of the world, it is almost certain that this Florida competition will prove very formidable, and may necessitate concessions to our miners on the part of the State.

"There is great activity in Coosaw river, and if the miners were selling their rock, or could afford to sell it, at the present rate of production, there would be large increase in the State's revenue.

"Undoubtedly the low prices received by the Florida miners must cause heavy losses to the men engaged in it, and it is altogether likely that many of the weakest among them will be forced to stop, and the outcome of the struggle for the mastery on the markets of the world will be watched by us with keen interest.

"We are not at present prepared to recommend any reduction in the royalty, but it may become absolutely necessary ere long. Owing to the great injury which results to the machinery by rust in a salt atmosphere when not in use, and also to the fact there is an amount of capital invested in plants which are not worth moving and of no use in any other business, the miners must continue their operations as long as they can pay expenses. The community of interest between the miners and the State is such that the State may be compelled ere long to lower the royalty or see the mining stop altogether.

"We deem it our duty to deal with the legislature with perfect frankness, so as to give them a clear understanding of the situation. The outlook is certainly far from encouraging, but we hope that as soon as the Florida miners shall have unloaded their rock on the market, prices will so far advance as to enable our own miners to continue the business at a profit."

Large Sale of Phosphate Property.

One of the largest phosphate deals that has been negotiated in Florida for some time past was closed in Bartow last week. A syndicate has purchased 740 acres of rich phosphate land in Polk county, for which \$60,000 in cash has been paid. This syndicate is composed of the following members, being a reorganization of the phosphate company of Bartow, Fla.: E. T. Walton, of Wilmington, Del., president; Mr. Reynolds, of Atlanta, vice-president, and George A. Lemaister, of Wilmington, Del., secretary and treasurer, who with F.

N. Buck and Frank H. Bailey, of that city, compose the board of directors. The company will at once erect a new plant with a daily capacity of 200 tons. Operations in mining will commence as soon as the machinery can be obtained.

Too Much Phosphate.

Mr. C. Thalheimer, of the Anglo-Continental Guano Works, London, sailed for Liverpool on the Teutonic last Wednesday after an extended tour of the phosphate-mining regions in this country. A few days before his departure he wrote us as follows:

"I have been all over the phosphate-producing countries in the United States and Canada and regret to say that there is too much activity in Florida to allow the market to regain a healthy basis. A great number of mines are putting in machinery, notwithstanding the ruinous prices, hoping that things will improve. In any case they cannot go worse, but as long as the production shows such a large surplus over the consumption in the entire phosphate market of the world there is little chance of a lasting improvement.

"Time, and let us hope the increasing consumption in the United States, will no doubt rectify this in a year or two, but meanwhile raisers have to face the fact that present prices leave them an actual loss. This is not only in Florida, but also in the Coosaw district. In Canada only two mines are working, the British Phosphate Co. of London and the Phosphate of Lime Co., and these will not be able to go on long. They cannot compete against Florida, which holds the key to the phosphate trade of the world.

"I expect the next year's production in Florida to be about 200,000 tons of hard rock and 60,000 to 70,000 tons of land pebble and Peace river phosphate. The consumption of hard rock will be a little less in Europe during 1893 than in 1892, because the difference in price between river and hard rock is so great that most consumers will take river rock for their lower grade acid phosphate, whereas in 1892, when prices for 75 to 80 per cent. rock and Coosaw and Peace river were about the same, they naturally bought the high-grade phosphate and reduced it by cheap Belgian phosphate."

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, December 1, 1892.

The local phosphate market is in a slightly better condition, and holders are not disposed to press sales at present prices. The volume of transactions during the week have been of moderate proportions, and latest advices both from Europe and from the fields of production seem to indicate that a better demand will prevail in the near future. We hear of several charters during the week, two to St. Helena's sound and one from Charleston. The arrivals are light, and the only vessel now discharging is the Nellie Howlett with 840 tons of Carolina rock. The market closes with prices steady and without material change. Ashley river rock is quoted at \$4.50 and Charleston \$4.75 per ton; river rock 58 to 60 per cent. is steady at \$4.50 f. o. b.; Florida rock is quoted at \$3.75 to \$4.00 for Charlotte Harbor and Tampa 60 per cent. product, and \$3.25 to \$3.75 for 50 to 55 per cent. product; land pebble is steady at \$4.50 to \$5.00 f. o. b. Tampa 68 to 72 per cent. product; Florida boulder 75 to 80 per cent. is unchanged at \$8.50 f. o. b. Fernandina. We quote:

Phosphate rock f. o. b. Charleston.....	\$1 50 @ 4 75
" " Peace river.....	4 00 @ 4 50
" " Baltimore.....	6 00 @ 7 00
(ground).....	8 50 @ 9 00

CHARLESTON, S. C., November 28.

The general phosphate market during the week has been fairly active, with moderate shipments and a fair demand. The shipments so far show a slight increase

over 1891, but prices are somewhat unsettled and more or less nominal. The shipments for September, October and up to the 18th of the current month 1892 were 33,753 tons, and for the same period in 1891, 32,714 tons. The clearances during the week ending November 18th were as follows: Schooners Alice Crabtree with 473 tons hard rock for New York; Mary S. Bradshaw, 510 tons, for Baltimore, and Fannie Brown, 730 tons, for Richmond, Va. Values are about nominal as follows: Crude rock \$3.75 to \$4.00 f. o. b., and hot air dried \$4.50 to \$4.75 f. o. b. Ground rock is dull at \$7.00 to \$7.50. Phosphate freights are dull, with no change in rates. Ashley river to New York \$2.25, to Richmond \$1.90 and Baltimore \$1.80. The following table represents the shipments of crude rock and ground from the port of Charleston, S. C., from September 1, 1892, to November 25, 1892, and for the same time in 1891:

Destination.	1892-93.		1891-92.	
	Crude.	Ground.	Crude.	Ground.
Baltimore.....	11,420	.....	14,817	.....
Philadelphia....	5,061	.....	4,745	.....
Boston.....	.....	.....	.....	.....
Elizabethport....	.....	.....	.....	.....
Wilmington, Del..	1,078	.....	747	.....
Barren Is., N. V..	.....	.....	1,085	.....
New York.....	2,682	876	2,300	688
Mantua creek....	1,319	.....	.....	.....
Weymouth.....	3,530	.....	4,080	.....
Richmond.....	3,897	.....	2,606	.....
Seaford, Del.....	600	.....	600	.....
Newton ck., N. J..	.....	.....	1,078	.....
Wilmington, N. C.	665	.....	450	.....
Welsh Point.....	.....	.....	.....	.....
Orient, L. I.....	.....	.....	.....	.....
Other ports.....	2,790	.....	1,670	300
Total exports...	33,942	876	32,181	1,735
Foreign ports...	175	.....	100	.....
Grand totals...	34,117	876	32,281	1,735

FERTILIZERS.

The fertilizer market is stronger under the recent advance in cotton with the demand moderate. Acid phosphate in bulk is quoted at \$9.50 to \$9.75, and inspected, in bags, at \$11.25. Ammoniated inspected is held at \$18.00 for 2½ per cent., \$17.00 for 2 per cent. and \$16.00 for 1 per cent. for future delivery.

PORT TAMPA, FLA., November 26.

Business at the port has been quite active during the current month, and the movement in phosphate has been of considerable volume. Indeed, there seems to be nothing to hinder Port Tampa from being the centre of the phosphate trade, and it looks at present as if this would be in the near future the leading Gulf port. Her present facilities for shipping the product are wholly inadequate for the present business, but the Plant Improvement Co. are rapidly improving the present surroundings, and their gigantic work now in progress will, when completed, give facilities to be found in no other port on the Atlantic coast. There are a number of vessels loading phosphate; the steamship Holyrood is now loaded, and will soon clear for a port in Europe. The German steamship Grashbrook, of Hamburg, arrived last week and went to the phosphate slip; she will take 2,000 tons of pebble to her home port. The schooner Star of the Sea, of Boston, takes out 1,000 tons of pebble rock for Baltimore, Md. The schooner Payson Tucker will load for Baltimore. It is said that the tonnage which has entered the port during the current month is the largest ever known. Machinery for the new wharf is arriving, and the dredge is soon expected, when active work will be begun and pushed forward with all possible dispatch.

BARTOW, FLA., November 26.

Throughout Bartow and Polk counties there is at present considerable of a boom, and with fifteen or twenty phosphate mines in full operation and other industries in blast, the scene is an active and progressive one. There is a decided improvement in real estate, and every day some new deal is

recorded. Since the election all business seems to have taken a turn for improvement, and several new deals in phosphate are reported. Col. E. T. Walton, of Wilmington, Del., largely interested in phosphates, is now in the city and is at the head of a syndicate that has just purchased for \$60,000 an extensive and very valuable property in Polk county, on which the company will erect a large and complete plant for the purpose of mining phosphate. To show the tendency of trade and volume of business in progress here, Colonel Tatum, cashier of the bank of Bartow, reports business for the month of October 50 per cent. better than for the corresponding period last year. A fire broke out in the Bartow Phosphate Works last week, and but for the effectual working of the hands and citizens the entire plant would have been consumed. Little damage, however, was done—not enough to affect the operation of the plant.

FERNANDINA, FLA., November 28.

The general features of trade at this port continue very encouraging, and in all branches there is an average amount of activity. Phosphate matters are at present engaging the attention of shippers and others to a greater extent than any other industry, and there is a large amount of the product awaiting shipment. Some changes in business firms are occurring, and among the latest that of the withdrawal of N. B. Borden from the firm of W. D. Wheelwright & Co. Mr. Borden is one of the leading business men of this city, and his enterprise has contributed greatly to the development of Fernandina. He is largely engaged in the phosphate trade, and represents one of the leading London phosphate firms, and with other enterprises to look after he deemed it advisable to withdraw from the old firm of Wheelwright & Co. There are a number of vessels expected during the month to load with phosphate. The steamship Wivanhoe arrived on Friday last from Madeira and will load with phosphate. The steamship Asphodel cleared on the 17th for Brake-on-Weser, Germany, with 1,000 tons of hard rock shipped by the French Company.

A Mammoth Phosphate Dredge.

The mammoth dredge which has been in course of construction for several months at the yard of the Merrill-Stevens Engineering Co. at Jacksonville, Fla., was successfully launched on the 22d. The dredge is intended for the San Francisco Dredging Co., and is of immense proportions. The dimensions are given as follows: Length 125 feet, beam thirty-five feet, and depth ten feet. It will be fitted with a 20-inch centrifugal pump, which will be driven by a 300-horse-power engine, besides auxiliary donkey boilers, and will be fitted up with its own electric plant for working incandescent and arc lights which will be used for night work. Most of the machinery is on the ground, and will be put in place as rapidly as possible, and the company expects to have the dredge ready in about six weeks' time. The launch was under the immediate supervision of Capt. A. C. Small, who has been acting as supervisor of construction for the builders. The dredge was christened Florida, and is certainly a splendid construction and a credit to the builders.

Phosphate and Fertilizer Notes.

MESSRS. J. A. ALDEN, of New Haven, and Frederick Lewis, of New York, president and vice-president of Foote's Commercial Phosphate Co., were in Bartow last week inspecting phosphate property. It is said that if negotiations terminate satisfactorily they will establish another extensive plant in a short time.

THE British steamship Sastran, from Kingston, Jamaica, entered and cleared at Key

West on the 24th inst. She was bound to Punta Gorda, Fla., for a partial cargo of phosphate, and will complete her cargo with cotton at New Orleans for Plymouth, England.

Two phosphate trains of thirty cars each went into Port Tampa, Fla., on the 21st inst. Twelve carloads were from the Bone Valley Phosphate Co., and the balance from various companies.

THE Marion Phosphate Co., Dunnellon, it is said, will shortly make Rock Spring their headquarters.

THE British steamship Asphodel, from Fernandina, Fla., with 1,000 tons of phosphate rock, arrived at New Orleans on the 24th inst. This cargo was shipped by the French Company and consigned to a house in Brake-on-Weser, Germany.

THE Marvina phosphate plant has a standing order with the Florida Central & Peninsular Railroad Co. for seventeen cars per week for the shipment of its pebble phosphate output.

THE phosphate business has become so extensive in the section between Lakeland, Fla., and Port Tampa that an extra train has been put on the road for the accommodation of shippers.

THE British bark Chittagong, which has been at Charlotte Harbor for about two months waiting for a cargo of phosphate, went ashore there recently. The owners of the tugboat which pulled her off, will liber her, as they cannot agree as to the amount of salvage. She had a large cargo of phosphate on board.

Mexican Notes.

ON November 28 Sub-Secretary of Foreign Affairs Aspiroz delivered to President Diaz, in the City of Mexico, the resignations of the entire cabinet. This leaves the President at liberty to appoint a new cabinet after his inauguration for the next term, beginning December 1.

THE American Public Health Association and International Medical Congress are now holding their twentieth annual session in the City of Mexico. The members are from all parts of the United States and Canada, and have visited every place of interest in and about the city. The explorations for the new water works and extensive work going on to free the city from danger of overflow have been especially examined and favorably commented upon. The government officials and citizens are striving to make the visit an enjoyable one, and are succeeding in a most delightful degree. Among the members present are Dr. James E. Reeves, Dr. T. C. V. Barkley and Dr. Cooper Holtzclaw, of Chattanooga, Tenn.; Dr. J. D. Plunkett, Dr. W. A. Atchison, Percy Warner and J. C. Warner, of Nashville, Tenn. A number of ladies accompany the members.

VICE-PRESIDENT AND SECRETARY STUART MACKIE and General Manager L. M. Johnson, of the Mexican International Railroad, have been out over the line from Monclara to Sierra Majada, and from there to Escalon, to perfect arrangements for extending the road into this rich and important mining country. Grading is now being done, and tracklaying will commence shortly. The road will pass through Cuatro Cunebras, a city of some importance as the shipping point for a number of rich mines.

THE Waters-Pierce Oil Co. has purchased from the Monterey & Mexican Gulf Railway Co. a large tract of ground at Tampico and intend erecting the largest oil reservoir in the world. This will serve as a distributing point for the entire Republic of Mexico. It is understood that the same company will take hold of and develop the petroleum wells in the Tampico district. They have, it is stated, purchased large

tracts of timber and agricultural land lying along the coast between Tampico and Vera Cruz and will set out coffee, orange, lemon and banana plantations. A large amount of valuable timber grows along this belt, and this they will cut and ship. Later on they will develop the asphaltum beds in the Tampico district.

At the recent election held in Tampico, the Hon. Carlos Barardi was elected mayor of the city. Mr. Barardi is the son of the Italian consul and a prominent business man. The inauguration will take place on January 1, 1893.

F. M. BARRON has been appointed master mechanic of the Monterey & Mexican Gulf Railway. In future his headquarters will be in Monterey.

It is rumored that the Mexican International Railroad will build another branch from Escalon to Monterey, and that preparations are now being made to start the survey. The International is handling an enormous amount of freight, and turning over to the Mexican Central at Torron more than the latter can dispose of promptly.

RECENT advices from the City of Mexico state that it has been definitely settled that the capital of the State of Vera Cruz shall be at Orizaba. There has been considerable contention as to where it should be located.

At Vera Cruz the harbor improvements consist in building a jetty system east from the mainland to a coral island or reef. When completed this will be over a mile long, about fifty feet wide and from ten to fifteen feet above the Gulf level. A large dredge is now being brought from Scotland, and with it the harbor will be so deepened as to allow vessels to lie at their docks.

ON THE Tehuantepec isthmus from Coatzacoalcas, on the Gulf side, a railroad will run 180 miles west to Salina Cruz on the Pacific coast. At the former place the harbor will be greatly improved by a jetty system, and at the latter a long jetty and docks will be built. This will greatly shorten the distance to San Francisco, and it is thought a large amount of freight will pass over the railroad. The present means of handling freight at Salina Cruz are very unsatisfactory. A promontory on the north side of the beach makes out into the ocean several hundred feet, forming an elbow. South of this and out in deep water large buoys are anchored and to these steamships are fastened while unloading. All cargoes are lightered, and as the sea is generally rough it is difficult work. From a large buoy outside the breakers to a point on shore a large line is stretched. The lighter is launched and a rope trolley at the bow and another at the stern is fastened on this taut overhead line, and the men then grab hold of this same overhead line and haul the lighter out to the buoy, the trolleys are detached and the boat goes to the ship. The return is made the same way. When a storm comes up steamers of Salina Cruz have to go to sea or go ashore. This difficulty will be entirely removed when the work mentioned is completed.

THE temporary commercial agreement which went into effect December 30, 1891, between the United States and the Republic of Salvador has been superseded by a definite arrangement which was signed on November 23 at Managua by the representative of the United States and the minister of foreign affairs of Salvador. It is believed that this agreement will tend to greatly increase the trade between the two countries and open a profitable market for many products of the United States which have hitherto been kept out by various restrictions.

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BALTIMORE, DECEMBER 2, 1892.

Notice to Advertisers.

*The last forms containing advertisements
are closed on Tuesday afternoon. New adver-
tisements or changes should be received not
later than Tuesday noon to ensure attention
in the issue bearing date of the following
Friday. Reading matter should be in our
office on Wednesday, although late news can
be received early Thursday morning.*

ONE of the best evidences of the
legitimate growth of a city is steady
activity among its building trades. A
most forcible illustration of this is pre-
sented in the progress of Roanoke, Va.
The new buildings now in course of
erection there represent an aggregate
investment of \$300,000, and cover a
variety of uses, including five churches,
schools, business blocks, etc.

THE announcement of the establish-
ment of a steamboat line between Pen-
sacola, Fla., and the island of Cuba, by
the Louisville & Nashville Railroad Co.,
is an important piece of news to the
States penetrated by this system. The
company will be ready for business on
December 16, when the first steamship,
the Baracola, will sail. The opening of
this line affords opportunities for the
further development of the coal trade of
Alabama, and gives to Kentucky a new
trade to cultivate. The time between
Pensacola and the port of Havana will,
it is stated, be made within forty-eight
hours.

AMONG the articles on cotton manu-
facturing in the South which we present in
this issue, there are two which possess
more than ordinary interest—one by
Mr. D. A. Tompkins, of Charlotte, N.
C.; the other by Mr. Henry G. Kittredge,
of Boston, Mass. Mr. Tompkins is
president of the Atherton Mills, now
building in Charlotte, and his intimate
connection with the industry during
many years qualifies him to speak intel-
ligently and with authority upon the
subject. Mr. Kittredge is the editor of

the *Journal of Commerce*, of Boston,
which represents the great textile
industries of New England. His com-
ments from the New England stand-
point are exceedingly interesting, even
though they be not accepted with-
out question by all Southern manu-
facturers. Mr. Kittredge is not accus-
tomed to write or speak without know-
ing the ground whereon he bases his
arguments, and we know that what he
says in our columns will carry weight.
What he says of the effect of climate
upon the industry, however, is limited in
its application, as is shown by the course
of the Southern cotton manufacturing
industry. On the Gulf coast, on the
lowlands of South Carolina and Geor-
gia and in the Mississippi valley
climatic influences are without doubt
a deterrent factor, but we fail
to recognize wherein the delightful and
salubrious climate of the Piedmont re-
gion of the Carolinas lacks anything
needful for successful manufacturing
operations. We believe that some of
our Southern manufacturers will have
something to say in regard to Mr. Kit-
tredge's arguments, and we hope to
see this much discussed point argued
further. But if we may not agree wholly
with this New England view, we are
none the less pleased to present it to our
readers. Well-founded criticism is never
amiss, and its results are beneficial.

In the last issue of *Hardwood*, A. M.
Winchester expresses his doubts as to
the correctness of our assertion that
10,000,000 feet of black walnut can be
found upon a comparatively small tract
lying on the Black Mountain in Ken-
tucky, and also regarding the large
amount of cherry found elsewhere on
these same mountains. Mr. Winchester
is particularly anxious to know what we
consider a comparatively small tract of
land, and suggests that possibly a gov-
ernment township, six by six miles, or
some 20,000 acres, is referred to. In this
we are pleased to say he is wrong. The
tract of black walnut which the writer
of these lines examined is some five
miles in length and possibly three miles
wide, containing about 9,000 acres. The
best of the walnut was found in some
5,000 acres, and was roughly estimated
at 2,000 feet per acre. The tract lies at
no great distance from the Big Stone
Gap extension of the Louisville & Nash-
ville Railroad, and if Mr. Winchester
can convince the natives of that section
that he is not in any way connected with
the internal revenue service he can
readily see this tract and many others
which are said to be equally valuable.
Regarding the tract containing the
cherry timber, we are pleased that Mr.
Winchester has called attention to the
error in giving 200,000,000 feet where
20,000,000 feet was intended. This tract
lies nearer the West Virginia line than
that containing the walnut, and consists
of some 12,000 acres, most of which is
well timbered. A trip through this rich
timber territory will prove a surprise to
the most skeptical lumberman, and we
greatly regret that we are not permitted
to give the exact location of the tracts
referred to, as by so doing we might in-
duce some of them to go down there
and examine on their own account.
Both Harlan and Letcher counties, and
part of Pike county, in Kentucky, offer
valuable territory for the lumbering
interest to develop.

The Cotton Crop.

It has been many years since the cot-
ton market has shown such excitement,
and rapid advances in price as the pres-
ent, and this may prove a good not un-
mixed with evil. Whether or not will
be shown at planting time next spring.
The advance in price of both spot cot-
ton and futures has been extremely
rapid, and offered such opportunities to
speculators that an unusual volume of
trading has been done both in this coun-
try and abroad. On last Saturday the
aggregate sales recorded in the New York
Cotton Exchange alone were 556,000
bales, and the advance in price was forty
points. At other centres the movement
was equally active. The trading has now
reached a point where it inclines to be
feverish, and reports which a month
since would be disregarded are now
used as a factor on the market without
due consideration of their accuracy or
reliability.

While this year's crop is much below
that of last year or the year before, it is
not probable that the sensational
estimates of 6,000,000 bales and
less will come near the mark.
The total receipts up to Saturday last
were 3,204,431 bales. For the corre-
sponding period last year they were
4,482,100 bales, or 49.61 per cent. of the
total crop, while for the preceding year
they were 4,012,869 bales, or 46.38 per
cent. of the total crop. If it is assumed
that 49 per cent. of this year's crop is in
sight, the total would reach but 6,150,000
bales, and on the basis of 46 per cent.,
6,950,000 bales. This latter is the safer
assumption. Planters are more likely
to rush their cotton in on a falling than
an advancing market, particularly after
the experience of last year, and when
the advance has been so rapid as the pres-
ent. A crop estimate of at least 7,000,-
000 bales, even with due consideration
of the reports of decreased production
and acreage, is much more likely to be
correct than anything undue that amount.
The bull tendency is to lower the esti-
mate and give under credence to crop
reports. Before long the top point will
be reached. The decline in Liverpool
early this week shows that it cannot be
far off, and while the undoubted de-
crease in production from last year
justifies high prices, it is doubtful if
spinnings can give more than those ruling
now, and in that case any further
considerable advance will be merely
speculative.

A Time to Use Common Sense.

Men and journals of extreme views of
each political party have uttered a great
amount of nonsense about the good and
bad results that will follow the return of
the Democratic party to power in na-
tional affairs. For a well-founded and
sensible view of the situation we com-
mend the following editorial from the
Boston Journal of Commerce, a paper
that speaks for one of the largest,
wealthiest and most important manu-
facturing constituencies in this country:

Whatever may be the course of legislation at
Washington during the remainder of the Fifty-
second Congress, after March 4, 1893, there is no
reason for the industries of the country to take a
pessimistic view on account of the political situa-
tion. It can be taken as a sure thing the majority
of voters in the nation have not elected men to
legislate for them under the presumption that
their material interests are to be neglected, and
it must be assumed that what is the will of the
majority is for the good of the country. It is in
the interpretation of that will where mistakes are

likely to happen. If the representatives of the
voting citizens of the nation misinterpret the
meaning of their election and act contrary thereto
it is equally safe to say that they will be made
aware of their errors of judgment when they
again ask for popular suffrage. The Fifty-first
Congress apparently went too far in tariff legisla-
tion in one direction. Let us see if the Fifty-third
Congress will go too far in the opposite direction.

We have a letter from a prominent man-
ufacturer, member of the present Congress and
re-elected to the next, who says: "The large
Democratic majority does not mean 'free trade,'
but 'fair trade,' under which we can live and
prosper." This correspondent is evidently satis-
fied that the election is not to his disadvantage,
and he has large interests at stake. The majority
of the consuming class in the Western and South-
ern States no doubt think the same as he does,
and if their opinions were known it probably
would be that there will be no diminution in
trade, but better, if anything, because people are
satisfied. We look for cancellation of orders for
goods and machinery in a number of instances.
It would be strange if this did not happen, to the
extent of the political disappointment of those
cancelling orders. But we should regard such a
course as temporary, and simply a visible expres-
sion of disconcerted hopes. What we advise our
readers and friends is, do not let your feelings
get the better of your judgment. Keep your wits
about you; keep cool. Your trade surroundings
are very much as you make them.

Business men—men who think more
about the details of their business than
about politics—will devote themselves as
closely as ever to the work of each day,
and will be prepared to meet any change
in conditions, whether for better or
worse. Neither political exuberance nor
political disappointment is a proper im-
pulse for the guidance of a business
man. Common sense is the only senti-
ment by which business should be
actuated, and particularly at this time is
such a guiding influence needed. This
nation of ours will not be overturned—
it cannot be—by either political party.
Sixty-five million people rule this coun-
try. The few hundred legislators in
Washington are not the masters, but
the servants, of the nation. If their
work be wrong their masters—the peo-
ple—will not be slow in speaking. Under
any and all conditions the country is
safe in the hands of the people. Sen-
sible business men will not lose their
equilibrium now, either because of ex-
hilaration or dejection over purely polit-
ical conditions.

England's Fuel Supply.

Mr. Edward Atkinson, who has re-
cently visited Great Britain to observe
industrial conditions there, is credited
with the statement that owing to the in-
creased cost of mining at greater depths
and in smaller seams, the increase in
cost of coal used by British railways
alone has been \$6,500,000 in a single
year. Regarding the Durham mines,
where the coal is mined at a depth of
2,000 feet, the temperature in the works
is 104° and the veins are but two feet
thick. The price of coal in London and
to all factories has been greatly in-
creased, and in the matter of coking
coals he states that the situation is seri-
ous, as the supply is approaching ex-
haustion. According to Mr. Atkinson
coke for iron-making is, in consequence,
\$5.00 per ton, and British manufacturers
are looking to appliances for economiz-
ing fuel.

Regarding the nearing exhaustion of
British coal mines, Mr. Atkinson's con-
clusions must have been based upon the
abnormal conditions that existed last
year during the miners' strike, for the
latest quotations show that blast furnace
coke is selling in the Middlesborough
district, which is the largest consuming
section, for 13s. to 14s., say an average
of \$3.25 per ton, and at Barrow-in-Fur-

ness the value is from about \$4.25 to \$4.50 per ton. At Cardiff furnace coke is selling for \$4.00 to \$4.20 f. o. b. As compared with this, coke is selling at Connellsville for \$1.90 per (net) ton, making the cost in Pittsburg \$2.60; in the Mahoning and Shenango valleys \$3.25; at Chicago \$4.65, and about the same at Eastern Pennsylvania points. In Chattanooga and Birmingham, and at points near the Pocahontas region, the cost is in the vicinity of \$2.25.

Regarding the approaching exhaustion of British coal mines, reference to the report of the keeper of mining records for 1871 shows that then 146,480 million tons of coal were estimated as available at depths of less than 4,000 feet, and 29,000 million tons between 4,000 and 6,000 feet. More recently, in 1888, Mr. Hall, inspector of mines, estimated the available coal left as 90,207 million tons, and that this would last for 171 years, due consideration being given to the steadily-increasing consumption. It is highly improbable that the coal deposits of Great Britain are nearing exhaustion rapidly enough to alarm iron-makers there, but the present price of coke is much above what it is in this country, and with greater difficulties to be encountered in mining the coal, it will become even more expensive. With the possible scarcity and higher price of foreign ores, upon which British iron-masters largely depend for their supply, the cost of iron-making then will be beyond the limits of economical working and many plants undoubtedly be compelled to go out. Imported ores now range from \$2.80 to \$2.90, and with coke even at \$3.20 the margin of profit must be very small. Cleveland pig iron is selling at \$10.60 for No. 3, hematite is quoted at \$12.48 and Scotch at \$11.18.

Notwithstanding the figures which Sir Lowthian Bell may evolve as to the cost of iron-making in this country, it is evident that the time is not far distant when British consumers will look to us for at least a portion of their supply of pig iron.

The Nicaragua Canal.

The meeting of the Nicaragua Canal Convention, now being held in New Orleans, will serve to bring forcibly before the delegates from Southern cities the immense importance of the project both to the country at large and particularly to the South. It will bring more prominently before Southern people the interests which would be benefited by the canal, and will show them the advantage which the South will have over all other places, both in this country and abroad, in trading with our Pacific States, with the Central and South American republics, and with Japan, China and other producing and consuming countries on the Pacific. Where it now is a shorter distance by sea from these countries to Liverpool than to Southern seaports, the conditions will be reversed by the canal, and the flow of wealth which has made England rich and increased her shipping interests beyond those of any other nation will be turned to this country, and the South is in position, both geographically and from its great resources, to receive the greater part of this benefit.

The early history of this canal project dates from President Polk's administration, when he secured a treaty from England allowing this government to

build the canal. Before this treaty passed to the Senate, President Taylor came into office, and under him a new agreement known as the Clayton-Bulwer treaty was drawn up and ratified by the Senate. This contained many unsatisfactory conditions which cannot be recognized by this government. When President Arthur was in office a treaty was negotiated which secured for the government the right to build the canal and establish a protectorate over Nicaragua. This lacked two votes of being ratified by the Senate and was withdrawn. After this the present Nicaragua Canal Co. applied to the governments of Nicaragua and Costa Rica and from them secured the necessary concessions to build the canal. After this, in May, 1889, they applied to Congress for a charter of incorporation. By the terms of the concessions they are required to commence work within a year after organization, and during the year after commencement of work to expend at least \$2,000,000.

At the end of the first year's work the governments of Nicaragua and Costa Rica appointed a commission to examine the expenditures and see if the terms of agreement had been complied with. The money expended was found to be nearly \$1,000,000, and both governments officially acknowledged the fact, and so reported to the United States government. Upon this the committee on foreign relations of the Senate appointed a sub-committee to examine the work and report on the political interests of the government in the enterprise, and also any legislation deemed desirable to secure the interests to this government. The result of this examination was the Morgan bill now pending before the Senate.

This bill provides that the government shall control the canal and insure its speedy construction, limits its cost to a minimum and its capitalization to the actual cost. Under the bill the government is authorized to guarantee the company's 4 per cent. bonds, provided that of the \$100,000,000 capital stock, \$70,000,000 is deposited with the Secretary of the Treasury, thus giving him the controlling vote in the management. This stock the government has the privilege of purchasing at any time before the bonds mature. By this means our government will have absolute control of the canal, and diplomatic troubles of all kinds will be avoided. In time of war it would give us the control and double the efficiency of our navy, as our vessels would have a short distance to go from the Atlantic to the Pacific, whereas those of other nations would be compelled to either go around Cape Horn or through the Suez Canal.

We trust, however, that the benefits derived during war may be long in coming. Of immediate importance is the benefit to the South. It will open a market for Southern products, and, of greater importance, will stimulate manufacturing throughout the Southern States. In the matter of coal alone it will afford Alabama, Tennessee, Kentucky and Virginia a market in which no nation can compete. The shorter distance it must be transported from these States to the Pacific coast will more than counterbalance any advantages which England may hold now. For cotton it not only will give better access to present markets, but will open

new ones. General Grant said that in time China would require 5,000,000 bales of American cotton, and if the growth of spinning in Japan continued to increase, that country would need 3,000,000 bales. With cotton delivered at a moderate price, our Pacific coast States would become consumers. Australia, for all its wool, buys cotton goods in England. In India spinning is steadily increasing, and it is probable that this country would also become a large consumer of American cotton. The same applies to our grains and foodstuffs.

Southern ports are nearer to Greytown, the Gulf terminus of the canal, than any others on the Atlantic seaboard, and they will, therefore, have the preference in shipping. From Charleston to Lima, for instance, is about 3,700 miles by the canal. To New York it would be nearly 4,200 miles, and to Liverpool nearly 6,500 miles. Every advantage in distance is in favor of Southern ports. With this movement would come the erection of manufacturing establishments to work raw material into finished form for shipment to these countries. Machinery, hardware, wooden articles, furniture, clothing and implements and products of many kinds would be produced and exported. There are millions of people on the Pacific coast who need, want and will buy what we can make and send them.

In return, from India, China, Japan Central and South America, the Pacific islands and our own Pacific States will come valuable products which now reach us in only small quantities or not at all. Their means of reaching our market will start a rapid development, and from this we will receive the benefits in supplying what they require. Viewed from all sides, the advantages to be derived from this canal are unquestionably so great, of such vital importance to this country, and even more so to the South, that every effort should be made by our Southern people to impress upon those who represent them in guiding the affairs of the government that in this their duty lies clearly before them, and nothing but straightforward efforts to have the government assume control of the enterprise will be acceptable.

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

JACKSONVILLE (Fla.) is flourishing, with plenty of business and building going on, is the way F. M. Robinson, an enterprising citizen of this Florida city, puts it.

Owing to the many serious fires which have taken place in Winston, N. C., the city council has determined to organize a paid fire department. A committee has been appointed to go North and purchase a new engine and other equipments, and also to secure a hook-and-ladder outfit.

THE Southern Express Co. held its annual meeting at the office of the company, Savannah, Ga., on the 27th instant, and re-elected the old officers, as follows: President, H. B. Plant; vice-president and general manager, M. G. O'Brien; vice-president, M. F. Plant; secretary and treasurer, G. H. Tilley; general auditor, C. L. Loop.

FLORIDA tobacco growers will meet at Marianna, Fla., on December 15 for the purpose of organizing a State tobacco-growers' association. It is believed that such a combination of interests will prove

of mutual benefit to all those interested in growing this plant, both from the information which each can obtain from others and from the greater stability which it will give to prices in that State.

THE Merchants' Exchange of Memphis, Tenn., has established a freight bureau, which will in future look after freight rates as regards that city, and prevent discrimination in favor of other places. The commissioner has not yet been appointed, but it is understood that the position will be filled by some one of the freight agents connected with roads entering the city.

THE steamer Brixham, Captain Duvil, of the Baltimore, Charleston & Jacksonville Line, arrived in Baltimore from Jacksonville on November 25. She brought 1,500 cases of fine Florida oranges, 100,000 feet of lumber and 100,000 shingles. Gray, Irelan & Co., of Baltimore, are the agents for the line.

ARRANGEMENTS are being made for a meeting of the presidents of all the South-eastern railways, to take place in Atlanta, Ga., on December 3. The meeting is called to discuss the direct trade project from Southern ports, as it is stated that an English company stands ready to establish a steamship line if they can be assured of the co-operation of all railroads.

THE *Appeal-Avalanche*, of Memphis, Tenn., secured from seventy-two cotton jobbers and buyers their estimates of the present cotton crop. Of these, seventeen estimates put the crop above 7,000,000, and fifty-five put it below. The average of all estimates is 6,624,916 bales. The maximum was 7,300,000, and the minimum 6,000,000. Receipts at Memphis up to last week were 149,062 bales, against 350,007 bales for the corresponding period last year.

A BILL has been drawn up and will be presented to the present legislature of Alabama, providing for the extension of the city limits of Birmingham to include two suburbs now known as North and South Highlands. It is likely that some of the other small towns lying near the city will be taken into it later on.

THE Pine City Tropical Home Co., which was organized by a number of Springfield (Ohio) parties headed by P. P. Mast, expect to make Pine City, Ga., a winter resort for Northern people, and will build there a handsome hotel. The place is located in the heart of a rich fruit-growing section, notable for its prolific growth and excellent flavor of its peaches, pears, grapes, bananas, figs, pomegranates, melons, etc. This company also intends engaging in fruit growing.

AN interesting as well as suggestive fact in financial circles is that during the week ended November 28 no national banks were authorized to commence business in any part of the United States.

THE steamship Bendi cleared from Galveston, Texas, last week, with 9,695 bales of cotton for Liverpool, England. She crossed the bar drawing fifteen feet three inches. This is the largest cargo of cotton ever carried across Galveston bar by any steamship.

THERE are rumors at Coal Creek, Tenn., that the outside miners are again organizing and will give serious trouble if the convicts are not sent away before Judge Turney, the newly-elected governor, enters into office. The miners think that if the convicts are not there when the governor assumes control of State affairs they will not be sent back again. The labor contract for convicts has four years to run yet, and Captain Anderson, in charge of State troops now at Coal Creek, is determined to suppress any attempted outbreak.

CORRESPONDENCE

Governor Hogg and Texas.

A Congressman's View.

HOUSTON, TEXAS, November 22.
Editor Manufacturers' Record:

I regret to say that the campaign between the supporters of Governor Hogg and Judge Clark occasioned a great deal of exaggerated statement regarding the baneful influence of Governor Hogg and his policy upon capital and business. I think a great deal of it was simply for political effect and to gain a point during the controversy in the interest of the followers of Judge Clark. In my opinion no other bad effect to the business interests will grow out of the re-election of Governor Hogg except that which will follow in the wake of campaign charges made for party and personal ends, the effect of which it will take some time to remove from the public mind.

I do know that neither Governor Hogg nor his trusted lieutenants have any hostility to capital nor any desire to make war upon capital legitimately employed in its own interest and for its own promotion, but which has not obtained by improper legislation franchises and privileges which give them undue advantages over the people in the license to charge and receive exorbitant rates for services performed.

I do know that he and his lieutenants would welcome and give all protection to all capital, however large, which shall seek to promote its own growth and co-ordinately develop the resources and industries of the State. I look for great prosperity in Texas. Very truly yours,

J. C. HUTCHESON,
M. C. Elect 1st District of Texas.

What a Railroad Official Thinks.

HOUSTON, TEXAS, November 21.
Editor Manufacturers' Record:

Mr. Harvey T. D. Wilson, of this place, has handed me an extract from your letter to him of the 16th instant, inquiring "what effect the re-election of Governor Hogg will have upon the business interests of Texas," etc. In reply I have to say to you that no State in this Union has a more patriotic and conservative governor than James S. Hogg, nor one under whom all interests will have just rights and property better protected under the law. The laws of Texas and the people of Texas are liberal and just to all interests.

We have an inviting field for immigrants and for capital, and on all hands they are welcome to the State, and all find nothing but hospitality.

It is a little singular that such impressions as you mention should exist in some quarters, for I state to you as a fact that during a little more than twelve months past there has been \$8,000,000 invested in manufactures alone in Texas, which is more than during any ten years of its previous history.

The "popular distrust" which you mention against Texas in some outside places has been created by a pestiferous brood of calamity howlers organized for political effect. This brood has been choked off by the result of the recent election and by the prevailing prosperity, and is not likely to be heard of again.

Yours truly, E. P. HILL.

A View from the Other Side.

Editor Manufacturers' Record:

The letter of the Bessemer Iron Mining & Manufacturing Co., of Lafayette, Texas, in defence of the administration of Governor Hogg, of that State, published in your issue of November 18, was no doubt written in perfect good faith, but any business man who says "stop my paper," as that company did, simply because the paper has taken some position that does not entirely harmonize with his ideas, at once makes it plain that he cannot take

anything but a contracted view of any public question.

The writer has watched the course of events in Texas very closely for some years, and he can positively assert that Governor Hogg's administration and the Alien Land Law have proved of enormous injury to the whole State. In the summer of 1891 the MANUFACTURERS' RECORD sent its business manager to Europe and kept him there for several months in close connection with all the financial companies interested in any way in the South, studying the general outlook. In London he found that the Alien Land Law and the general agrarian spirit that seemed to pervade the State had aroused a bitter hostility to all Texas investments. The whole State was being strongly denounced as dishonest in passing such laws, and it will be years before the evil effect is overcome. In the North the effect was just the same, and the writer personally knows that leading capitalists in that section were afraid to trust any money in new Texas investments, and were anxious to withdraw all that they had previously invested in the State.

During the last spring I had the privilege of spending six weeks in Texas, and while there made careful inquiry as to the feeling of leading business men in the State about the Alien Land Law and the effect of the control of the State government by the demagogue element, which can exist in any State only by arousing hostility to all corporations and to capital in general. Meeting many hundreds of business men, bankers, merchants, lawyers, real estate owners and agents and others from all parts of the State, I did not in the six weeks hear a single one speak a word in favor of the administration of Governor Hogg, while everyone with whom I talked on the subject was bitterly opposed to him. That he has been re-elected simply proves that the power of political demagoguery has not yet been fully broken in Texas, though it has been greatly weakened.

The resources of Texas are so great that the State will undoubtedly prosper, notwithstanding the re-election of Governor Hogg. Its vast wealth of minerals and timber, its enormous agricultural possibilities, its excellent climate, furnish a foundation for growth which even unwise laws cannot fully stop, but under a better administration its progress would have been more wonderful than any Southern State has ever yet made.

I have no interest whatever in the matter except to see Texas, as well as every other Southern State, prosper to the fullest extent, and I know that the spirit of hostility to corporations which the politicians have cultivated in many parts of the South has been of great injury to that section.

R. H. EDMONDS.

Electrical Transmission of Power.

BALTIMORE, MD., November 18.
Editor Manufacturers' Record:

I noticed an article in your paper of to-day under the headline of "Electric Power for Cotton Mills" which strikes me as having its weak spots. In the first paragraph it stated: "If the current required for the motor is more than one-fifth of that required for the lamps, the latter will vary in brilliancy as the load is on or off the motor," which is certainly a bad feature.

The above is only true with the use of crude machinery. The dynamo electric machine of to-day, with its regulator and other apparatus for controlling the current, is used in connection with any first-class machine, and 85 per cent. of the load can be thrown on or off without any perceptible difference in the brilliancy of any lamp burning. For illustration, taking a 1,000-light dynamo electric machine of which 750 lamps are displaced by motors of about seventy horse-power (whether it be one motor or a dozen) working at variable

loads, such as are used by cotton manufacturers or even punch presses, we can say, and can demonstrate the fact, that the remaining lamps will neither gain or lose one particle in their brilliancy. I have seen dynamos tested to their highest capacity which vary from twenty-five lamps up, in which all lamps were thrown off except one single sixteen candle-power lamp, and this, under the above extraordinary circumstances, did not increase to quite twenty candle-power, and that only for a few minutes, soon coming back to its normal state.

In the second paragraph the writer spoke of experimenting, in which he is about ten years behind the times. Either he is misinformed, or Baltimore is far ahead, one of the two. I will venture to say that, from a financial standpoint, there is not a piece of machinery that is being driven by any power under say too horse-power that cannot be successfully operated by a motor (or motors) at various points. I have noticed that the practice generally followed by a good many so-called electricians is to put in the lightest possible power for a given machine, sometimes placing an eight horse-power motor where there ought to be at least ten horse-power. The consequence is precisely the same as it would be with any other kind of motive machinery, i. e., that it will either not do the work at all, or that it will deteriorate so rapidly that it is pronounced impractical, and the matter "laid on the table" under the assumption that the electric business is not far enough advanced. I will venture to say that the above-named class have done more to ruin the electric transmission of power than all other causes put together. To conclude this subject, I can conscientiously say that the experimental stage of electric power is over, although I cannot say that the top of the ladder is yet reached any more than with the steam engine.

Regarding the cost in comparison with other means of transmission, I will state—taking a distance of from one-quarter to ten miles in length—that there is not a known form of transmission of energy that will in the least compare to that of the electrical method from either a financial or an efficient standpoint. Belts, cables, ropes, compressed air, steam piping, hot air and many other crude ways which were employed by our grandfathers belong, like the "wind-mill" power, to the days gone by. It will be well for any one contemplating the use of electricity to first find out whether it will or will not pay to use the power in question. It is true there are some motors that are not up to the point; but investigate, and what will you see? In such cases the people handle them as if they were blacksmiths' tongs. They get oiled, it is true—over-oiled—"enough to last a week," as they put it, flooding the whole machine. Do they get cleaned? No! Nobody has time, and they run well enough anyhow. Do the commutators ever receive attention? No! They put heavy tension on the brushes and let her go; commutators are cheap, so are brushes. I will venture to state that there are nine out of every ten motors whose commutators never receive attention at the hands of experienced people. What about the fuse strips which are placed as the main safeguard against burning out the motors, and which are intended for constant potential circuits? When they "burn up," or are fused, properly speaking, a piece of copper wire is put in that don't burn up when we put on a little extra load. So says the man who attends to the motor.

Now, take the motors and dynamos that have the proper care and attention and what will you see? Machinery ideal, not only combining the most beautiful, clean and economical principles, but also a machine under perfect control, whose speed can be regulated at will and whose commercial efficiency is incomparable. It is worthy of thorough investigation both for

your own satisfaction and as an object whose merits demand your attention.

M. A. DELEW, E. E. & M. E.

Savannah's Trade in Naval Stores.

By Col. I. W. Avery.

Savannah enjoys the distinction of being the first naval stores market in the whole world.

The naval stores business of Savannah did not begin until 1873, but it leaped forward with tremendous rapidity until the city became, and still is, the first naval stores depot not only of America, but of the world.

The following remarkable table gives the amazing growth of this business:

Year.	Barrels.	Value.
1874.....	18,200	\$59,029
1875.....	110,964	110,964
1876.....	268,176	268,176
1877.....	577,988	577,988
1878.....	774,267	774,267
1879.....	998,602	998,602
1880.....	1,249,833	1,249,833
1881.....	1,692,251	1,692,251
1882.....	2,165,848	2,165,848
1883.....	2,821,116	2,821,116
1884.....	3,278,276	3,278,276
1885.....	2,914,326	2,914,326
1886.....	3,296,503	3,296,503
1887.....	4,639,283	4,639,283
1888.....	4,211,368	4,211,368
1889.....	4,353,074	4,353,074
1890.....	5,974,879	5,974,879
1891.....	9,223,859	9,223,859
1892.....	1,219,610	5,716,610

Naval stores consist of spirits of turpentine and rosin, averaging one barrel of spirits to four of rosin, while the spirits in total value were greater than the rosin two to one. The foreign shipments of spirits have averaged nearly double the coastwise shipments, while the foreign shipments of rosin have very little exceeded the coastwise trade.

The heaviest receipts of naval stores are in the months of May, June, July and August, January and December also being full months. In 1891-92 the highest prices ruled in the months of February and March, and the lowest in July and August.

The rosins are put up in barrels of 280 pounds, and consist of three qualities, ranking in value as first, "pale;" second, "medium," and third, "common." The relative value of these grades are pale \$3.30, medium \$2.20 and common \$1.55. The pale varies in value \$1 a barrel, the medium 75 cents and the common 50 cents.

The largest receipts come to Savannah on the Savannah, Florida & Western Railroad, which transports three-fifths of the stores, and the Central Railroad next, with small receipts by the Savannah river and by coasting ships. Southwestern Georgia is the main source of supply with its great yellow pine forests.

Wilmington, N. C., and Charleston, S. C., which were large naval stores markets, have almost abandoned the business, so that Georgia is the territory of the world's supply.

Of the exports of naval stores from Savannah in 1891-92 Great Britain had \$4,000,000, Germany over \$500,000, the Netherlands \$400,000, Belgium \$180,000, Italy \$100,000, and the Argentine Republic \$50,000, these six countries taking the foreign shipments. Savannah can hold her naval stores supremacy for a century.

A REPORT from San Antonio, Texas, states that Gen. Dryenforth and his party bombarded the skies from 5 o'clock last Friday evening until 3 o'clock Saturday morning. At 11 o'clock on the latter day clouds gathered and at a little past 12 a big balloon was sent up and exploded in a particularly dense cloud. A downpour of rain followed, continuing for five minutes, and after it a lasting drizzle. The experiments will be continued, and it is to be hoped that some definite results may be obtained to prove whether or not the gathering of clouds was caused by the explosions or by meteorological conditions.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 371.]

Western Maryland's Progress.

A forcible illustration of the possibilities of growth attending the Western Maryland Railroad is shown in the record of progress presented in the annual report of President John M. Hood. The gross earnings are \$178,943.53 greater than for 1891, and the net earnings \$59,084.15 more than for 1891. The increase in net earnings for the past two years has been \$14,422.26, which, capitalized at 5 per cent., would give \$2,885,455.20 as the appreciation in the value of the property. The net earnings of this property have been bounding upward since 1890, when the increase over 1889 was \$22,145. The figures for 1891 show an increase of \$55,338 over 1890, and \$77,483 over 1889. The showing for the fiscal year ended September 30 gives an increase of \$59,084 over the previous year, and the figures are \$136,507 more than the net earnings for 1889, thus showing an increase in net earnings for the three years of more than 50 per cent. The approximate report for October shows that this upward tendency still continues, the net earnings being \$24,133.64, against \$17,286.69 for the same month of last year. The annual report gives the following details: Expenditures for betterments, \$86,236, of which \$15,417 are for new buildings, \$8,227 for improved bridges, \$15,420 for steel rails for branch lines, \$11,450 for new side-tracks and stone ballast, and the remainder for water stations, machinery, etc. There were 1,298,063 passengers and 998,938 tons of freight moved at average rates of 1.63 cents per passenger per mile and 1.39 cents per ton per mile. The amount paid for the use of tracks of other roads during the year was \$115,830, which amount, if the company had independent facilities, would not only pay interest on their cost, but would represent a net saving to the company calculated to reach \$50,000 the coming year. It is, therefore, reasonable to suppose that it will not be long before steps are taken to acquire such facilities, especially since the company has been granted some very valuable privileges by the city of Baltimore. In considering the future of this company, then, it is well to recognize several important factors that will influence its earning capacity. As for example: The Potomac Valley Railroad, which was opened for freight on August 1 and for passenger traffic on September 12, too late, of course, to cut much of a figure in the results of the year ended September 30, is calculated to be a most profitable branch, starting out with a heavy volume of business in sight. The work upon the Baltimore & Harrisburg Railway, eastern extension, the new line between Porter's Junction and York, Pa., is so far advanced that it cannot fail to make a showing in the next annual statement. This line will afford competitive rates to the manufacturing city of York, whose annual payments for transportation now nearly equal the gross earnings of the Western Maryland. This line gives the company important connections. The proposed Harrisburg extension, Porter's to Bowersdale, will also give valuable connections, and places the road in the anthracite coal fields. The line from Thomasville through York to the Susquehanna will give a direct route to the great iron-manufacturing region of Pennsylvania.

Pennsylvania Improvements.

The officials of the Pennsylvania Railroad have been considering the important problem of reducing the time over their route from New York to Washington to four and a-half hours, and they regard it as susceptible of practical solution. In the

pursuit of this end the engineers of the company have been making investigations, and for months past extensive alterations have been in progress. It is now stated that as soon as Congress, upon its assembling, and the local authorities of Washington grant permission the company will begin a system of improvements in and about that city which will cost in the neighborhood of \$2,000,000, and designed in connection with the plan to reduce time as above mentioned.

Rates in the Southwest.

The fate of the Southwestern Railway and Steamship Association will be determined at a meeting of traffic managers in St. Louis on December 5. If the efforts towards reorganization fail, it is understood that the Gould lines will favor a tonnage pool, provided all roads come in. Vice-president Waldo, of the M. K. & T., has issued a circular to officials of Southwestern lines in Texas, suggesting a conference in St. Louis on December 13 to consider the adoption of a plan for the equitable division of traffic on lines similar to the arrangement between the New York trunk roads.

Owensboro, Falls of Rough & Green River Railroad.

The parties in control of the Owensboro, Falls of Rough & Green River Railroad obtained possession in November, 1891, at which time announcement was made that the purpose of the new owners would be to extensively improve the property and the completion of the road to Middlesborough. The recent action of the stockholders, in authorizing the directory to issue \$6,000,000 of bonds, was in pursuance of this policy. The proceeds are to be applied to the completion of the line now under construction from Fordsville to Horse Branch, Ky., a distance of sixteen miles, and the building of the road to Middlesborough. At Horse Branch the road will connect with the Newport News & Mississippi Valley Railroad. When this connection is made, which will be on January 15, 1893, the Owensboro, Falls of Rough & Green River road passes to the control of the Huntington system, and a through line will be established from Owensboro to Louisville. The route of the road, both present and prospective, is through a rich mineral and timber section, and the founder of the enterprise, Capt. B. S. Triplett, had as part of his plans the continuation of the line through the Cumberland Gap to the seaboard.

Receiver Oakman Means Business.

The latest episode in Richmond Terminal promises some interesting developments, and the public will not be required to wait very long for them, judging from the position taken by Receiver Oakman. Having obtained authority from the United States Court to institute proceedings to secure the cancellation of the now famous contract by which the Terminal Company purchased \$12,000,000 of the capital stock and \$3,553,000 of the collateral trust bonds of the Georgia company, which Company was organized solely to control the Central Railroad of Georgia in the interests of the Terminal, and being also authorized to sue for the recovery of money lost in the transaction, he has made a demand on the parties who sold the stocks and bonds to return the money received and take back the securities. He states that he will wait a reasonable time for responses to this demand, but if none are received inside of ten days from November 28 he would positively commence legal proceedings to enforce it.

The control of the Georgia Central Railroad was turned over to the Terminal in November, 1888, by the sale to the latter of nearly all the securities of the Georgia Company. The last-named corporation

had bought \$4,000,000 of the high-priced stock of the Georgia Central road and had issued \$12,000,000 stock and \$4,000,000 bonds of its own against it. The Richmond Terminal Company paid \$35 a share for the \$12,000,000 of stock and took \$3,553,000 of the bonds at par. It is alleged that the amount paid for these securities, over \$7,000,000, was just twice what they were worth. The securities are now on deposit with the Central Trust Company as part security for the issue of \$11,500,000 5 per cent. bonds issued by the Richmond Terminal Company.

Charleston & Savannah.

The stockholders of the Charleston & Savannah Railway Co. held their annual meeting at Charleston, S. C., on November 28, and the following officers were elected: H. B. Plant, president; H. S. Haines, vice-president; R. B. Smith, secretary; J. Moultrie Lee, treasurer; C. S. Gadsden, superintendent; directors, H. B. Plant, B. F. Newcomer, A. F. Ravenal, H. S. Haines, William T. Walters, W. H. Brawley and E. K. Meeninger. The gross earnings for the six months ended June 30 were \$353,262; operating expenses, \$260,089, and the net earnings, \$87,173. The six months' interest on the mortgage bonds, amounting to \$52,457, was paid. The interest on the income bonds is payable from the net earnings of the company for the calendar year, and was consequently not passed on at this meeting.

Missouri, Kansas & Texas Report.

The result of the first year's operation of the Missouri, Kansas & Texas Railroad under its present management indicates a satisfactory condition of affairs. The property was in the hands of receivers for the first half of the calendar year 1891, the present company taking possession of the property on July 1, 1891. The fiscal year having been changed to end June 30, the first report of the company as reorganized covers the year ended June 30, 1892. The gross earnings for that period were \$9,750,536; operating expenses and taxes, \$7,380,567; net earnings, \$2,369,969. The interest and rentals amounted to \$1,859,826, February coupons on \$20,000,000 of 4 per cent. second mortgage income bonds, \$400,000, making disbursements \$2,259,826, which from the net earnings leaves a balance of \$110,169. From this sundry accounts amounting to \$31,226 are to be deducted, and a surplus of \$78,943 remains. The average mileage in operation was 1,674; gross earnings per mile \$5,824.71; net earnings per mile, \$1,415.77; ratio of expenses to earnings, 75 7-10 per cent. The company charges to the expense account \$1,154,574 of extraordinary expenses, distributed as follows: Bldg-lasting 317 miles, \$295,000; repairing and renewing 362 bridges, \$279,199; fencing 745 miles, \$87,375; renewal of rails, 220 miles new rails and sidings, \$493,000—a total, as above stated, of \$1,154,574. The obligation to pay interest on the second mortgage bonds becomes absolute after August 1, 1895, and the annual fixed charges of the company will then be augmented \$800,000. The management has kept in view this fact, and recognize that it is vital to the permanent solvency of the company that the physical condition of its railroad should by that time be brought to a maximum of efficiency in order that the income may not be taxed to make extensive betterments. The St. Louis extension of the road is approaching completion, as well as the continuation of the Southern line to tidewater connection at Houston. These extensions and the road proper will shortly be inspected by a party of New Yorkers, including H. C. Rouse, John Greenough, and representatives of the firms of Brown Bros. & Co., Lee, Higginson & Co. and S. S. Sands & Co. At Houston the party will be joined by

Robert Fleming and representatives of the Dutch interests in the property.

Railroad Notes.

At the annual meeting of the stockholders of the Mobile & Montgomery Railroad, held at Montgomery, Ala., on November 26, G. W. Craik was re-elected president; A. C. Danner, of Mobile, vice-president, and J. H. Ellis, of Louisville, Ky., secretary. The stockholders of the South and North Alabama Railroad met on the same day and re-elected H. F. DeBardeleben, of Birmingham, president; G. W. Craik, secretary, and W. M. Newbold, superintendent. Both of these roads are part of the L. & N. system.

SECOND VICE-PRESIDENT PERDY, of the Missouri, Kansas & Texas Railway Co., in answer to a query from the MANUFACTURERS' RECORD as to the truth of the report that his company was preparing to build a 300-mile line from Coffeyville, Kansas, to Vernon, Texas, replies that it is a mistake.

THE Hartwell Railroad, a 10-mile branch of the Richmond & Danville system, will have a receiver. The United States Court at Atlanta has named E. B. Benson for the position.

THE action taken by the Richmond & Danville underlying bondholders' committee is receiving the approval of a large number of holders of these securities. The best evidence that the plans proposed for the protection of these investors are appreciated and their necessity recognized is indicated by the rapid progress made in securing deposits. The Mercantile Deposit Co. of Baltimore has been receiving these bonds, and the committee has named the Mercantile Trust Co. of New York as the depository for that city. Louis Fitzgerald, of New York, president of that company, has been made a member of the committee.

THE Memphis Passenger Association has formally collapsed and the slashing of rates has commenced with the usual demoralization.

IN a recent case decided by Judge Boreman, at Parkersburg, W. Va., it appeared that the West Virginia Transportation Co. had leased the Laurel Fork & Sand Hill Railroad for ten years, and the suit was instituted by the railroad for alleged damages growing out of the lease. The court sustained the transportation company, holding that neither corporation had the power to make such a contract, and no authority for same was to be found in the general laws of the State.

THE month of October furnishes another testimonial to the able management of the Chesapeake & Ohio, the net earnings showing an increase over the same period of 1891 of \$49,453. A gratifying feature of the month is that although there is a falling off of \$38,003 in gross earnings, the operating expenses have decreased \$87,455.

JUDGE KEY, of the United States Court at Chattanooga, has appointed W. P. McClatchey temporary receiver of the Chattanooga Construction Co. of West Virginia, which built the Chattanooga Southern. The bill was filed by Carter & Ragan, who built the Pigeon mountain tunnel for the road, and who claim \$38,000 as due them. The motion to make the receivership permanent was to be argued on December 1.

THE gross earnings of the Northern Central for October were \$712,229, and the net earnings \$273,058, an increase of \$56,674 over the same month of 1891.

At the annual meeting of stockholders of the Savannah, Florida & Western, held in Savannah, the old board was re-elected, as follows: President, H. B. Plant; vice-president and general manager, H. S. Haines; general auditor, D. F. Jackson; secretary, R. B. Smith; J. M. Lee, treasurer; directors, H. B. Plant, H. S. Haines, Henry Sanford, B. F. Newcomer, J. H. Estell, H. M. Flagler, M. K. Jessup.

MECHANICAL.

Universal Radial Drilling Machine.

The McNaull Machine & Foundry Co., of Ronceverte, W. Va., has placed on the market the new No. 3 universal radial drilling machine shown in the accompanying illustration. The workmanship on this machine is all that can be desired. All gears and racks are cut, and shafting and screws are made of good grade of steel. The column which carries the arm is bored and fitted over a stationary stump which runs to the top of the column when the latter is clear down. This stump is bolted fast to the sole plate, and has sufficient length of bearing to prevent the column from swaying when raised to its highest point.

The column is slotted at the lower end, and by means of a screw through two

the angle of the arm and traversing it forward or backward. A vertical line may be drilled at any angle by adjusting the angle of the spindle head on the end of arm and moving the arm vertically to point desired. A hole may be drilled vertically downward, vertically upward or at any angle within range of the arm without stopping the machine. The head is held from turning on the arm by two clamps or quarter segments, one of which is made to set up with a wrench, so that a quarter turn will hold the head perfectly tight on end of arm at any angle. This swivel end is a perfect turned double bearing, and is such that the spindle may be turned around the entire circle while the machine is running. The belt may be shifted by lever or by foot on trips at end of sole plate, and by a lever the small bevel gear may be set up or down, thus raising or lowering the column and

two and a-half inches; size of whole in spindle, Morse socket No. 4; traverse of spindle, twenty inches; size of countershaft pulleys, sixteen inches; speed of countershaft, 180 revolutions; width of belt on cone, three inches; floor space required, about four and a-half by six and a-half feet; weight, about 7,000 pounds.

Cutter's Suspension Street Hood.

Street lighting with incandescent lamps is getting to be quite a common practice in all parts of the country. In many places the lamps are hung over the centre of the street at a crossing. This plan is the best on shady streets, where the foliage would cut off much of the light from a lamp placed at the corner. In order to get a proper distribution of the light it is necessary to have a specially designed reflector which

insulated from the suspending cable. The pulley used with this hood is known as "Cutter's Petite" and is a small size lamp-supporting pulley, designed for arc-lamp practice, holding the hood safely even if the hoisting rope should slip.



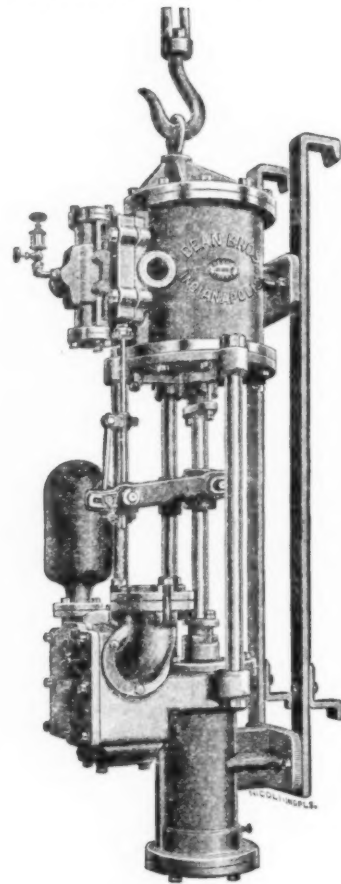
CUTTER'S SUSPENSION STREET-HOOD.

The same suspension outfit is also used by some plants on alternating circuits with the transformer hung just above the hood, and in all cases make a neat and very serviceable combination. George Cutter, of Chicago, is the patentee and sole maker.

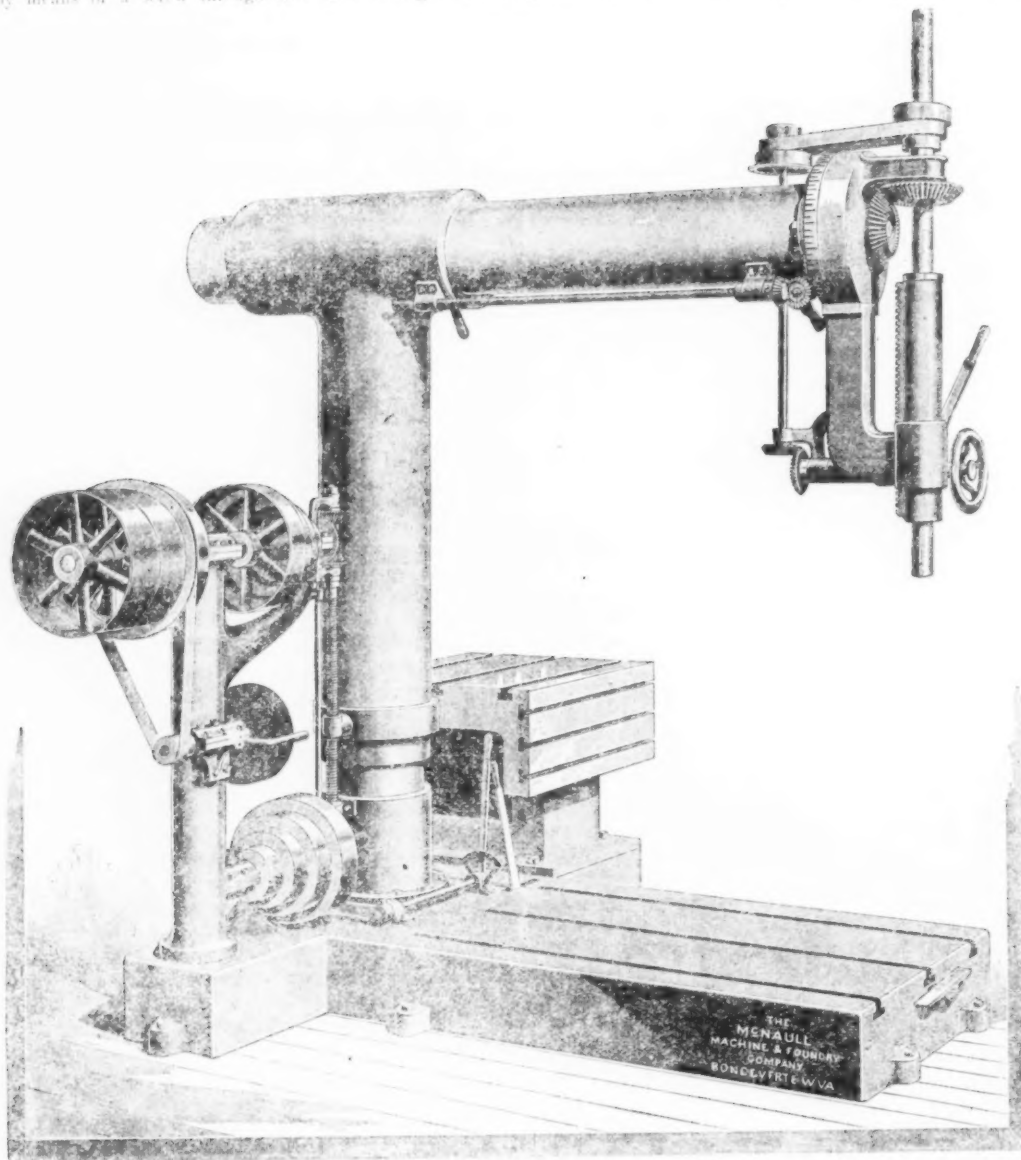
A New Vertical Sinking Pump.

A new vertical sinking pump, which has just been brought out by the Dean Eros, Steam Pump Works, of Indianapolis, Ind., is shown in the accompanying illustration.

This pump is intended for use in mines, shafts, wells, quarries, pits or reclaiming flooded mines or in any place where a portable pump is required. It is a single cylinder, direct acting pump, occupying but little space. Being double acting, it throws a continuous stream of water, and



A NEW VERTICAL SINKING PUMP.



UNIVERSAL RADIAL DRILLING MACHINE.

losses, a slight turn of the wrench makes it perfectly solid and stationary. The column is raised or lowered by means of a screw, and, as it rests on ball bearings, is very easily moved in its radius. The arm, which travels through the top of the column and through a bearing twenty-eight inches long, is closely fitted; the column is partly split, and can be clamped on the arm by means of a screw passing through two bosses, so that a slight turn will hold it perfectly tight.

The arm travels forward and backward by means of a screw, and the drill spindle, which is on the end and on a swivel face plate or head, indexed, can be set at any angle, enabling the workman to stand in front of his machine while drilling. This machine will drill a horizontal line of holes at any parallel with each other by adjusting

arm. There is also saved by being able to grind drills without leaving the machine, for with this machine is furnished a complete emery grinder. The table has both vertical and horizontal faces, provided with T slots, and is exceptionally long.

The machine has power feed, back gear, and each one is belted and tested before leaving the shops. The dimensions are as follows: Diameter of column, fifteen inches; height of column when up, seven feet; length of arm, about eight feet; drills to centre of circle outside of column, ten feet in diameter; greatest distance from sole plate to end of spindle, six feet five inches; greatest distance from floor to end of spindle, seven feet two inches; total height of machine, nine feet two inches; size of table, twenty-six inches wide by thirty inches long; diameter of spindle,

can be combined with the protecting hood. In many cases the hoods, hooks and pulleys used have been picked at random from the nearest stock, the result being a combination which neither looks neat nor is well adapted to the purpose.

After studying the needs in this line for some years, George Cutter has perfected the suspension street hood shown in the cut, which embodies a number of novel features. The hood is designed so as to thoroughly protect the socket from the weather, while a unique spring catch and hinge allow it to be opened when desired. The nozzle which supports the socket is arched, so that it can be readily wired, and the tin parts are separable so that they can be nested for shipment. Another patented feature is the method of clamping the parts of the cross arm, whereby the hood itself is

can be operated suspended by a hoist or attached to the side of a shaft. In either case it works equally well.

It has the new Dean noiseless valve-gear, with adjustable stroke, which has proven to be one of the best devices yet invented for operating the valves of steam pumps. They are made with a view to withstanding the rough usage to which they are subjected, and are suitable for permanent use in mines. When required the water cylinder is made of gun metal or

bronze to resist the action of bad mine water. The pumps are made in a variety of sizes and combinations.

All pumps are made under consecutive numbers, and all parts are made interchangeable and are thoroughly tested and inspected before leaving the shops.

The pump shown in the illustration has steam cylinder fourteen inches diameter,

ing surface. The interior of the entire construction, in every part and detail, is readily accessible from the outside for examination, cleaning or repair.

The furnace extends under the entire boiler, and is of proper height to permit the use of any kind of fuel. As will be noted upon reference to the illustrations, the tubes are arranged in transversely-

into the steam and water drum again from whence it started.

The proportion and combination of parts throughout the boiler is such that expansion and contraction due to changing temperatures can occur without straining or disturbing the position of any part or system of parts. The tubes being short, tubular expansion is reduced to a small fraction as compared to that which is due to the employment of tubes of sixteen to twenty feet long. The headers for tubes are made of steel or iron, according to service required. They are placed closely together side by side, forming complete side walls to the furnace and affording a limited amount of effective heating surface.

Outside the furnace, opposite to each end of each tube, a hand-hole of proper size to admit a tube or a tube expander is provided and fitted with a cap, held in place with a cross-bar and bolt. This cap is accurately faced and ground to a perfect steam and water-tight joint. The caps are exposed upon opening the side doors below mentioned, and can be examined or tightened if necessary. Upon removal of a cap the internal condition of a tube is open to inspection, to cleaning, or in case of leakage in the expanded joint, to re-expansion; and in case of accident to a tube or depreciation due to long usage, a new tube can

In this boiler the water circulation is natural and positive. It is passed through the tubes and exposed to the action of the fire in a steady and continuous flow. The steam generated is quickly conducted to the drum, and, in consequence of the ample disengaging surface provided, separates from the water without turbulence, and is dry steam ready for use.

The system of cross tubes employed in this boiler results in the concentration of heating surface to a degree unattainable by any other straight-tube system, yet it does not contract the area of grate. By reason of its sectional character it can be delivered in places wholly inaccessible to any other desirable boiler. A boiler of 200 horse-power can be passed through a four by four feet doorway, window or sidewalk opening. A boiler of 100 horse-power occupies a floor space of seven and a-half feet square and is less than ten feet high.

THE proposed action of insurance companies in New Orleans to raise the insurance rate on cotton is being strongly opposed by the New Orleans Cotton Exchange. W. C. Flower, president of the exchange, has written an open letter on the subject in which he says that in 1886 the rate on cotton was 1 per cent. with the co-insurance clause. In 1890 this was

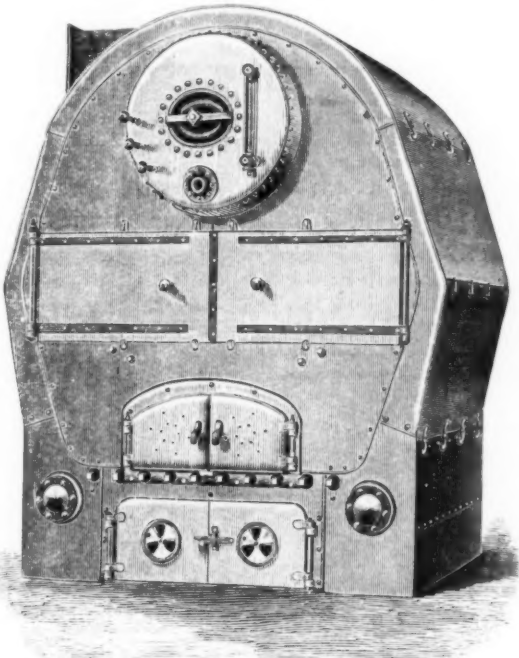


FIG. 1.—A NEW SECTIONAL WATER-TUBE BOILER.

pump cylinder eight inches diameter, stroke twelve inches, suction six inches, discharge five inches.

Five hundred varieties and combinations of steam pumps are made by the Dean Bros. Steam Pump Works.

A New Water-Tube Boiler.

The New York Safety Steam Power Co., of New York city, is placing on the market a new type of sectional water-tube boiler, the construction of which is shown by the

inclined series of several tubes per section. Every tube employed is a straight lap-welded boiler tube of best make, and every tube-end connection is expanded. Every tube is wholly in the furnace directly over the fire and exposed to the full effect thereof, and every square inch of tube is thus employed as active heating surface.

The heating surfaces and waterways are so arranged that the movement of the water contained in the boiler is constant and rapid. Its course is as follows: From

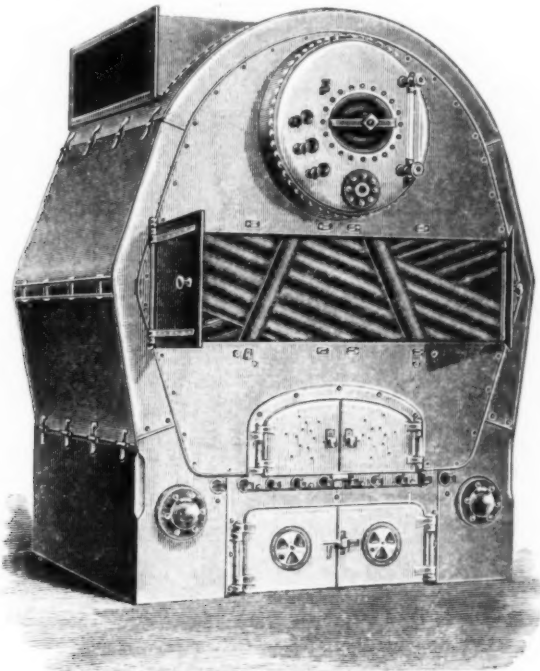


FIG. 2.

accompanying illustrations. This boiler belongs to the sectional class, in which the water is contained in small tubes and chambers designed to secure the important requisites of safety, durability, accessibility and high evaporative efficiency. It is designed to be economical of valuable space, and at the same time to be of liberal proportions in grate area and heat-

the steam and water drum located above the tubes, into which water is fed, it descends the water legs, four in number, placed outside the furnace, to the water and mud drums at the base; thence it passes via the tube connections into the lower series of headers, thence through the tubes over the fire into the upper series of headers, thence via the tube connections

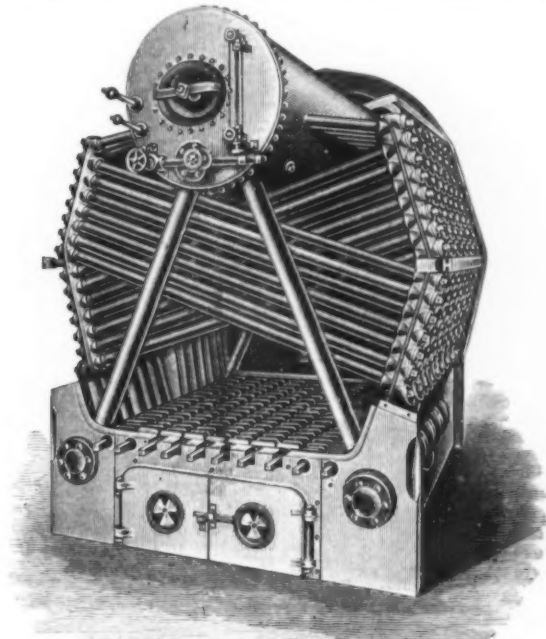


FIG. 3.

be substituted with but little trouble and delay. Each end of each mud drum is provided with a removable cap, accessible from outside.

The furnace is lined with fire-brick. The only other brickwork required to erect a stationary boiler consists of two foundation walls of proper depth, rising above floor level about twelve inches. The sections, drums, etc., when connected and ready for pressure, are tested as may be required. After test they are encased with heavy sheet iron lined with non-conducting material— asbestos and magnesia.

In this boiler all the factors of safety of a water-tube boiler are present. Each section of tubes and headers is tested under 500 pounds hydrostatic pressure at the works, and known to be sound and perfect before being incorporated in a boiler. The main steam drum is made of open-hearth homogeneous flange steel plate having a tensile strength of not less than 60,000 pounds per square inch of sectional area, and possessing sufficient homogeneity, toughness and ductility to show a contraction of area not less than 50 per cent. The plate employed will be of proper thickness to enable the boiler, under government standard of pressure allowable, to carry a working pressure of 250 pounds per square inch.

raised to 1½ per cent. without the co-insurance clause and 1 per cent. with it. In 1892, after the great cotton fire, it was raised to 2 per cent. with the co-insurance clause, insurance without this clause being prohibited. In thirty-one years, from 1860-61 to 1890-91, the receipts of cotton in warehouses and presses in New Orleans was 30,585,590 bales. Of this, and in the same time, but 9,495 bales were damaged and consumed by fire. The total value of this cotton was \$2,057,055,178, and the value of that destroyed \$367,300. This equals an average annual loss of \$11,848 from fire, or a loss of \$1.00 in every \$5,600. In 1892 a cotton fire occurred while an exceptionally high wind was blowing, and over \$1,000,000 worth of cotton destroyed. Including this year, the total amount of cotton handled in warehouses and presses in New Orleans was 31,711,921 bales, valued at \$2,096,476,763. Of this total 41,495 bales, valued at \$1,587,800, were destroyed by fire in the thirty-two years. This equals an average annual loss of \$49,614, or a loss of \$1.00 in every \$1,320. With such a small average loss the exchange claims that insurance companies have done little more than collect dividends, and can well afford to carry insurance on the present 2 per cent. basis or even less.

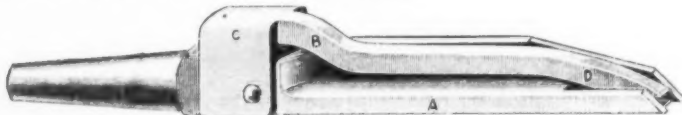
LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department, on page 346.]

Self-Cleaning Mortise Chisel.

The accompanying cut shows a handy tool made by the Self-Cleaning Mortise Chisel Co., 164 Clark street, Chicago, Ill. This tool consists of the chisel proper (A), with a chip holder (B, D), the extremity of which is pressed against the front of the chisel by means of a spiral spring below the point (C).

The chip holder is provided with a bevel on the inside end opposite the point D, so constructed that when the chisel strikes the wood it is forced open, thereby allowing the chip to run up between it and the chisel,



SELF-CLEANING MORTISE CHISEL.

where it is held in position by the pressure of the spring against it until the chisel strikes the wood the second time; then the chip is thrown out by coming in contact with the second chip, which itself remains in like position until thrown out by the third, and so on until the mortise is completed.

The chisel makes a mortise and cleans it perfectly at one and the same time. In construction it is similar to the ordinary chisel, is operated in the same manner and is adaptable to all mortising machines.

Four-Roll Single Planer and Matcher.

The Bentel & Margelant Co., of Hamilton, Ohio, have brought out a new planer and matcher provided with all the latest improvements, heavily and substantially made and doing accurate and smooth work. The accompanying illustration gives a clear

five inches in diameter, and are driven by a train of large and well-arranged gear wheels of wide face on reverse side of the machine.

The arrangements of the cutterhead and housing and of the adjustable pressure bar on bonnet, with chip breaker, are in all respects the same as the most modern large planers and matchers. While the pressure bar can be set very close to the cutting line, it can also be set back to allow the use of curved or moulding knives, either in connection with the straight knives, or for forming combinations of moulding knives. The cutterhead is made of forged tool steel, and provided with four "T" slots for the use of knife bolts with heads and nuts. A patent triangular shearknife cutterhead is furnished in place of this when so ordered.

The chip bonnet carries the chip breaker on its lower side and swings entirely back out of the way for changing or sharpening the knives. The cutterhead and feed rolls can be raised for the planing of material up to six inches in thickness, and a driving pulley is provided on each end of the mandrel. Special attention has been paid to the construction of the side heads, the housing being made heavy and provided with extra long bearing boxes. The arrangement of the lower end of the mandrel or step is new, and is guaranteed not to heat or require renewing for many years. The usual trouble in the adjustment of the side mandrels to an accurate position is done entirely away with, as they will remain at the given height supported by solid, heavy slides, so that no raising or lowering of mandrels or housings by complicated levers or ill-arranged screws is required. The housings are

The tables are cast solid and accurately planed on their surface. The front feed rolls have adjusting weights, operated by easy moving levers, while the feed rolls back of the matcher heads are held by strong adjusting springs.

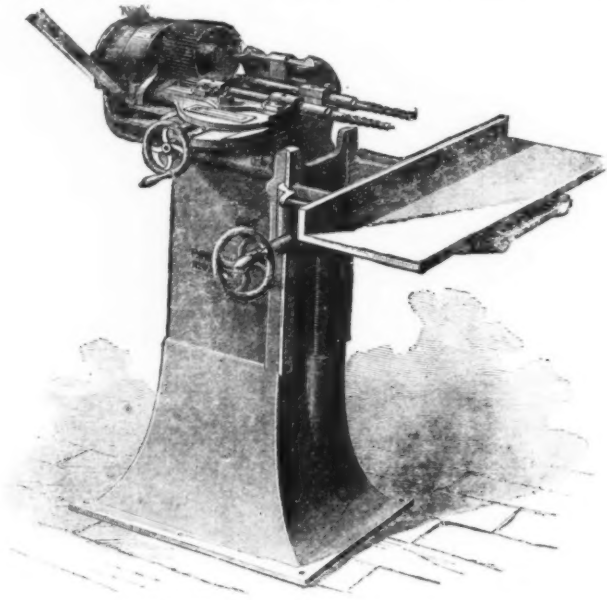
Two-Spindle Boring and Mortising Machine.

A machine which will commend itself to woodworkers is the one shown in the ac-

chine, boring holes from one to sixteen inches between centres and weighing 600 pounds, and a 5-inch machine, boring holes from one to five inches between centres and weighing about 500 pounds. Either of these machines can be furnished with a hand lever and a treadle.

Southern Lumber Notes.

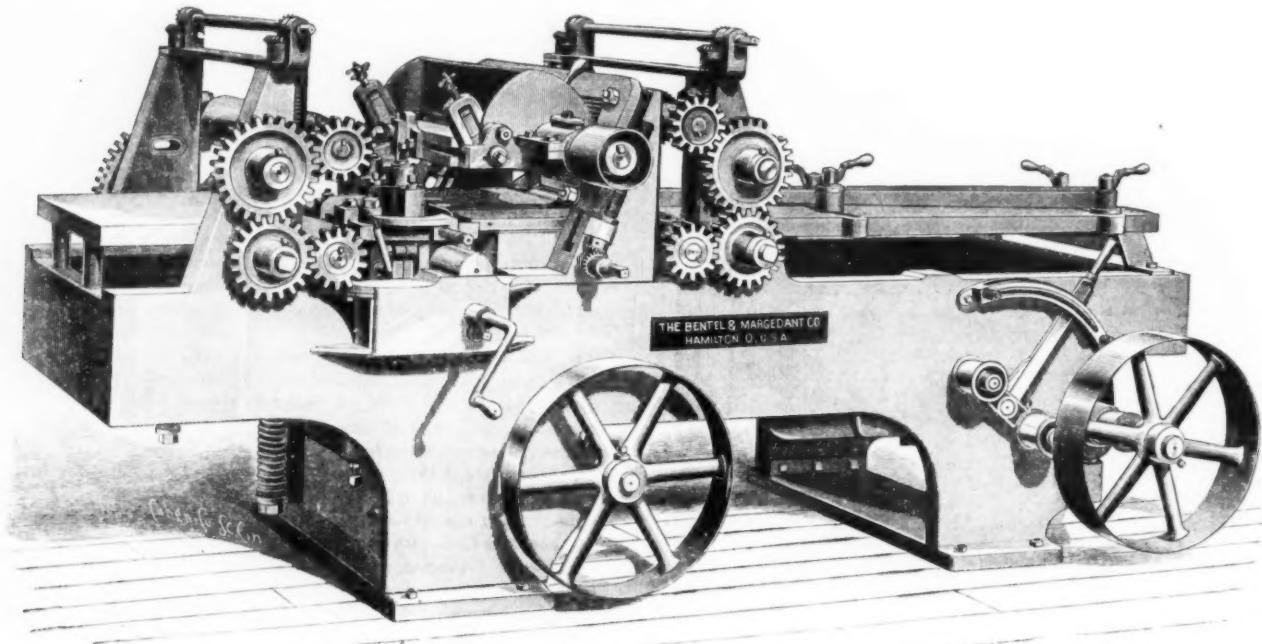
THE officers and directors of the Lumbermen's Association held a meeting in



TWO-SPINDLE BORING AND MORTISING MACHINE.

companying illustration and put on the market by P. Prybil, 508-520 West 41st street, New York city. This machine will bore two holes at one time and at any angle from the horizontal to vertical. The table can be set ten inches below the centres of spindles, and it slides forward and back against an adjustable stop. When so ordered for mortising it is also made to slide sideways. This latter work, mortis-

Houston, Texas, last week to discuss the advisability of changing the place of the next annual meeting from Galveston to some point in Northern Texas. After some discussion, it was unanimously decided that the directors could not change the place designated by the convention. The other business of the meeting referred to the management of the association and the proceedings were not given to



FOUR-ROLL SINGLE PLANER AND MATCHER.

idea of the design and general arrangement of the parts.

It will plane one side up to twenty-four inches wide and six inches thick, or three sides twenty inches wide and six inches thick, and will match up to twenty inches wide. There are four driving feed rolls provided with accurate and smoothly constructed expansion gearing, operating freely and without strain, with studs and journals of large diameter and made of fine steel. The feed rolls are

simply moved sideways, remaining positively fixed at the given height, the machine frame being made wide enough to plane twenty-four inches wide without lowering the matcher spindles out of the way.

The chip breaker on the matcher heads is strong and so arranged that it will yield easily to unevenness of the material and keep close up to the cutting line. The machine is well arranged with all requirements to hold pressure plates or hold down springs, and also with fences and supports.

ing, is done with a revolving tool, cutting on end and side, making a mortise with half-round ends. When only one spindle is to be used it can be disconnected from the gearing by loosening a single nut. This should always be done for mortising, as the spindle then runs at a much higher speed than when boring.

The spindles and pinions are of steel, and their bearings are arranged with adjustments for taking up wear. Two sizes of the machine are made, a 16-inch ma-

the public. There were present President R. D. Gribble, of Gainesville; Secretary C. P. Drake, Austin, and Col. Thomas C. Morgan, Hubbard City; Capt. George Locke and E. F. Swasey, Lake Charles; Albert Stevens, San Antonio; Robert Law, Beenville, and Col. C. H. Moore, of Galveston, directors.

THE Mississippi Lumbermen's Association met in New Orleans on the 23d inst. in special session to take action whereby the association could be benefited in rela-

tion to freight rates. The lumbermen say that rates should be equalized, as at present some railroads charge more than others, to the detriment of their interests. An effort will be made to equalize the rates so as not to give one dealer an advantage over another. Among the gentlemen present were Mr. George Gardner, vice-president, of Laurel, Miss., and representatives of leading lumber trade journals.

THE saw mill of English Bros., Lee county, Fla., was destroyed by fire last week. The loss is said to be \$1,500, with no insurance.

THE Winston Lumber Co., of Tampa, Fla., has been asked to submit proposals for 400,000 feet of lumber for a new phosphate plant.

THE small saw mill of the Stimpson Lumber Co., at New Berne, N. C., was burned on the 23d inst. The loss is estimated at \$6,000, with no insurance.

ISAAC N. HEARN, of Wicomico county, Md., has purchased a 400-acre tract of land near Pocomoke. The tract contains about 1,000,000 feet of first-growth pine and a large quantity of oak and ash timber.

THE Oulette saw-mill property at Vicksburg, Miss., has been purchased by the S. S. Spangler Milling Co. for \$14,000. The mill is almost new, and will be transferred to its new owners on February 1.

THE steamship Cherokee left Jacksonville, Fla., last week for New York with freight, including 200,000 feet of lumber, 1,000 cross-ties and 4,000 bundles of shingles.

THE Lee County Commercial & Improvement Co., of Fort Myers, Fla., will build before spring a \$10,000 saw mill and wood-working plant. The wood-working plant will consist of planing mill, shingle mill, fruit and vegetable box machine, etc.

W. J. DENMAN writes us that he has just completed his saw-mill plant at Welch, W. Va., with a daily capacity of 20,000 feet. He will cut principally poplar and white oak.

THE Sabine River Lumber Co.'s mill at Logansport, La., is now running on full time, and is turning out 60,000 feet of lumber a day. They have logs enough in the river to run them until next summer. The planers are running on full time, but very few shipments are being made at present.

THE Cypress Lumber Co., of Apalachicola, Fla., started up its planing mill on the 18th inst. It has been closed down for the past two months for repairs, and during that time new appliances have been added, making it perfect in every sense as a first-class planing mill.

MESSRS. H. J. LUTCHER, J. M. Mott, A. Gilmer and E. W. Bancroft were in Houston on the 17th inst. in conference with the authorities of the Southern Pacific and the Santa Fe Railroads looking to a settlement of the difficulties now existing between these two lines regarding lumber rates in Texas, whereby the mills of the southeastern section are practically shut out from a large portion of their legitimate territory.

MR. W. S. FOLTZ, of Bluefield, W. Va., manufacturer and dealer in hardwood lumber, has just received an order for 5,000,000 feet of hardwood dimension stock to be shipped to the East, and will increase his plant's capacity at once.

MR. WM. DAT, of Cambridge, Md., has purchased about 1,000,000 feet of standing timber on Causey farm in Wicomico county.

THE Rappahannock Lumber Co., of Fredericksburg, Va., has all its machinery in place, and as soon as the water will admit will "boom" hundreds of logs down the river which are now ready.

E. E. JACKSON & CO., of Salisbury, Md., have purchased about 60,000,000 feet of pine timber, together with a large milling

plant at Plantersville, Ala., from Mr. Welch, of that town. The timber will be manufactured into lumber and shipped to Washington, D. C. George W. Ruark, now of Salisbury, will remove to Plantersville to take charge of the plant and act as superintendent.

CAPT. JOHN HOOPER has purchased Wilson Layfield's farm near Pittsville, Md., and will cut on same several thousand feet of pine wood for shipment to the Baltimore market.

THE large lumber mill and lumber yard of Thomas A. Garriques, known as the Sunny South Lumber Co., at Lewisville, Texas, thirty miles north of Texarkana, Texas, was attached by the sheriff on the 19th instant in behalf of a Kansas City (Mo.) firm on a claim of \$30,000.

WORK is progressing rapidly on the new saw and planing mill now being built by the Rapides Lumber Co. at Woodworth Station, on the Kansas City, Watkins & Gulf Railroad. The machinery will arrive about December 1.

MESSRS. J. H. VINCENT & Co.'s new circular saw mill at Robinsonville, Miss., has been completed, and is now in operation. Its daily capacity is 20,000 feet, and it is cutting ash and red oak, plain and quartered.

MESSRS. RASBERRY & FRANK, C. M. Kehoe and William Pearce are equipping a complete floating shingle mill plant at New Berne, N. C.

THE plant of the Warren Lumber Co. at Woodville, Texas, is still held for sale by the receiver, Mr. Jno. H. Kirby, who bid in the property last month, has forfeited his 10 per cent. of the purchase price (\$52,000) by failing to complete the sale.

MR. ADOLPH LEGAL, of Philadelphia, has purchased a tract of 30,000 acres of land in Garrett county, Md. A large quantity of virgin timber is standing on the property.

THE Gardner & Lacey Lumber Co., of Georgetown, S. C., has thoroughly overhauled its mill and resumed operations.

MR. E. O. EMERSON, of Maine, has purchased the old furniture factory at Georgetown, S. C., and is equipping it for sawing clapboards from cypress for shipment to New England. He will also put in a Perkins shingle machine.

THE Palmetto Cypress Co., of Georgetown, S. C., has put a new Perkins ten-blocker machine in its mill and made other improvements. Operations have been resumed.

REPORTS from Savannah, Ga., represent great activity in the crosstie trade of that city. One contractor, who furnishes Northern railroads with ties, states that he has orders enough on hand to fill five ships if he had them. He is expecting one in this week which will load for Philadelphia. Most of the ties will go to the Reading and Pennsylvania Central roads. Other Northern roads have sent in orders, and on the whole the prospects in this line of business are very encouraging.

MR. J. H. BUGBEE, of Jacksonville, Fla., whose saw mill was destroyed by fire recently, will erect a fine new plant about two miles from Jacksonville. He has purchased the Wilson & Hunting mill on St. John's river, and will erect on the site a mill of 100,000 feet capacity every ten hours.

IT is reported that the property of the Sunny South Lumber Co. at New Lewisville, Ark., has been attached for a claim of \$30,000 in favor of a Kansas City (Mo.) bank.

MESSRS. WILBERT BROS., of Plaquemine, La., are building a new and complete mill at that place. The main building is 46x130 feet in size, with a 15-foot filling room. The outfit will consist of a Filer & Stowell

band and carriage, Prescott steam feed, Hill nigger, endless chain haul-up, a Chal-loner ten-blocker shingle machine, Lane & Bodley engine, 10x30, and three boilers with 20x6-inch flues, and all modern improvements. The old mill, known as "Little Jim," has about served its time, and will be torn down and some of the machinery used in the new mill. Their stock on hand is about 1,500,000 feet of lumber.

A REPORT from Rome, Ga., states that Messrs. J. J. O'Neill & Son, sash and blind manufacturers, have made an assignment. The assets are said to amount to \$30,000, while the liabilities are unknown.

THE Plaquemine Lumber & Improvement Co. has built a Ketchum dry-kiln 30x100 feet in size at Indian Village, La. The company now has 2,000,000 feet of lumber in the yard, and about 4,500,000 shingles. Its plant turns out daily 400,000 shingles and 30,000 feet of lumber.

THE saw and planing mills of S. R. Conger, of Jackson, Tenn., have just been completed and are among the finest and most complete plants of the State. The manufacturing department consists of a brick building 60x120 feet, and east of that is located the engine, boiler and machinery building. The planing mill, 96x180 feet, is in every respect complete in all its appliances, and every convenience and labor-saving invention has been introduced. The enterprise of Mr. Conger is worthy of emulation, and his extensive plant is an ornament to the city.

MR. S. B. BORDEN, who has been engaged extensively in the lumber business at Fernandina, Fla., with W. D. Wheelwright, of New York, has severed his business connection with the latter gentleman, W. D. Wheelwright and Charles Hewett, both of New York, succeeding to the business. Mr. Borden is one of the most enterprising business men of Florida, and the number of enterprises in which he is directly engaged renders his withdrawal from the lumber firm necessary. The Amelia River Packing Co. and a large brokerage in phosphates are among some of his enterprises. He also runs a shingle mill with a capacity of 75,000 feet per day. Mr. Borden also represents the extensive firm of C. A. & H. Nichols, phosphate dealers, of Mining Lane, London, Eng., whose interests and his own in this line require a greater portion of his time. His relations with the new lumber company of W. D. Wheelwright are of the most friendly character.

LUMBER MARKET REVIEWS.

New York.

OFFICE OF MANUFACTURERS' RECORD,
No. 126 Liberty Street,
NEW YORK, November 29, A.

With the exception that the election excitement has died out, there is nothing new to report in the New York lumber market. Things have once more assumed their usual aspect among the trades in general, and it is not generally believed that the change in administration is destined to cut much of a figure, at least in the lumber business.

A conspicuous figure in the lumber market at this time is yellow pine. Within the last week or two a demand for yellow pine for export has sprung up, and this, combined with the fact that the election excitement is now passed, has caused a tendency to marked improvement. The export demand has tended to use up all surplus stock on hand, and, of course, has tended by that much to improve the local market. Prices, however, are unchanged, but the natural tendency is, of course, with a better demand to more firmness. Some men interested in yellow pine prophesy that the present good demand will not only keep up, but that prices will surely improve within a very short time, the election uncertainty being over and also the uncertainty regarding shipments to fill South

American orders. Originally, the dullness in yellow pine was probably due to South American troubles and unsettled conditions in that part of the world and the consequent falling off in export orders, but several good orders from that part of the world recently have given a good tone and some firmness to the yellow pine trade. Within the past week several large orders from South America have been filled here.

Building orders, 12 in. and under.....	\$19 50	20 00
" " " " 14 in. and up.....	20 00	21 00
Yard orders, random.....	17 00	18 00
Ship stock, 40 ft. average.....	22 00	23 00
Heart face siding, 1 and 1 1/2 in.....	18 00	19 00
1-inch wide boards.....	22 00	23 00
1 1/2 and 1 3/4-inch wide boards.....	23 00	24 00
Kiln-dried sap.....	15 00	16 00
Rift-sawn flooring, rough cargo lot.....	36 00	38 00
" " " " tongue and grooved, in carload lots.....	40 00	42 00

In spruce the conditions are about unchanged. But little is moving in cargo lots on account of the lateness of the season. The wholesale dealers find things quiet, but the yard trade here is very good. With a fair demand, however, the prices are tending upward. In fact, prices are expected to stiffen somewhat, and even a slight advance during the past week is a noteworthy feature.

There has been also little change, if any, in North Carolina pine. The mills are full of orders and, naturally, the prices are well maintained. In fact, those handling North Carolina pine complain that they can get rid of more of that product than they can get hold of at the prices ruling at present.

Cypress trade has been very good. In fact, there has been quite a little activity here recently in that wood, although practically it is just getting introduced. It will undoubtedly secure a good footing. Prices are very firm, but there are no indications of any immediate advance in it.

In poplar and in the general hardwood trade there are no unusual features. The greatest demand is for oak. Some of the retailers say that they have more orders than they can well fill, and this is bound to react upon the wholesale trade. But, on the other hand, some predict that oak is now at the highest point in its popularity, and that when it does once begin to wane in popular favor, cherry will come in as far as it is available, and be the fashionable substitute. At present, however, whenever a big order does come in, it is for oak.

QUARTERED OAK.		
1 1/2 inch and up.....	\$19 00	20 00
Thicker.....	20 00	21 00
Common.....	35 00	36 00
PLAIN OAK.		
1 1/2 inch and up.....	\$15 00	16 00
1 3/4 and 1 1/2 inch.....	16 00	17 00
2 inch.....	17 00	18 00
Export oak.....	32 00	34 00

Poplar is scarce, and the tendency is to higher prices. However, a number of poplar men complain that the market is not as strong as it should be.

The situation in the lath trade is practically unchanged. Prices are about \$3.00 a thousand. The demand at the yards is first-rate, and the immediate outlook is for higher prices.

Condition of ash unchanged.

ASH.		
1 inch.....	\$35 00	37 00
1 1/2, 1 3/4 and 2 inch.....	37 00	38 00
2 1/2, 3 and 4 inch.....	38 00	41 00
Common.....	22 00	24 00
Balusters.....	22 00	24 00

Baltimore.

OFFICE OF MANUFACTURERS' RECORD,
BALTIMORE, December 1, A.

In the general lumber and timber market there has been a fair average business for this period of the season, and the demand has ruled fairly active, with prices steady to firm as to quality and dimensions. Commission houses report trade fully up to the average, and the amount of through business is better. Receipts of kiln-dried North Carolina yellow pine are fully ample for all requirements and values are generally maintained. Air-dried lumber of choice grades is selling better, but low grades are dull. Flooring grades are in good demand, but box lumber is slow sale at current figures. The better grades of cypress move well, and for choice lots there is a good demand, but low grades are

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IRON MARKETS.

Philadelphia.

[From our own Correspondent.]

PHILADELPHIA, November 30.

Although the volume of business in crude iron has somewhat diminished during the past few weeks, there has been a fairly steady demand at the firm prices ruling at the beginning of the month. From the point of view of the manufacturer the market is generally considered to be in a healthy condition, and iron men appear to be satisfied with the outlook for the new year. There is no expectation of any appreciable increase in the demand during the coming month, but it is believed that the present heavy consumption will continue to take care of the output at the present rate of production, and thus prevent any increase in stocks. The heavy purchases during October for deliveries running into the new year have placed many of the leading buyers and sellers in a position to await the outcome of the next few weeks before making further contracts for the future. Producers, as a rule, have either sufficient orders on their books to carry them along into the new year, or have reduced their unsold stocks to a low point, and therefore see no advantage in stimulating buying by concessions on quoted rates. The fact that production is increasing, notwithstanding the approach of the season of the year when business naturally shows a falling off, causes consumers of pig iron to display great conservatism in placing orders for any material in excess of their actual wants unless more satisfactory terms than those now asked can be secured. The future course of the market, therefore, depends largely on the activity among the general pig iron consuming industries of the country and the rate at which the production of crude iron continues during the closing month of the year. At present prices continue firm at the following quotations for best brands of iron at tidewater or its equivalent, with the usual concessions for Southern grades delivered in Central and Southern Pennsylvania and in Delaware and Maryland:

Standard Pa. No. 1 X.....	\$15 00/16	15 75
" " No. 2 X.....	14 00/16	14 75
" " Forge.....	13 00/16	13 50
Southern coke No. 1 foundry.....	14 75/16	15 00
" " No. 2.....	13 75/16	14 25
" " gray forge.....	13 00/16	13 50

Pittsburg.

[From our own Correspondent.]

PITTSBURG, November 30.

The steadiness that has marked the tendency of the pig iron market for the past few months is becoming firmer each week, and there is now an expectation that the advance towards spring will show a still better situation. The general idea has been that as the winter months closed the trading would fall off to the point of nothing, and this outlook was based on the experience of all preceding years. This has been a year of surprises, however, and now there are the very strongest indications that the pig iron markets will be steadily improving as the time advances.

While the demand was only a moderate, but quite steady and satisfactory one, the furnacemen made no attempt to touch prices as they dropped lower and lower, but now that there is no doubt that the next few months at least will be better than those that have just gone, the prices are being handled to conform to the actual situation. The heavy stocks that were on everyone's hands have been largely disposed of in spite of the fact that all, with very few exceptions, of the furnaces are in blast, and the cry that a full production means always an excessive surplus. Stocks are accumulating, it is true, but the excess is not more than the normal. Neither the furnacemen or the buyers are giving any attention to the question of surplus just now, and the latter are going ahead with their buying in the belief that the present

is as good a time for buying as the near future will be. In the marked general improvement Bessemer is still in the lead and promises to remain so. The rest of the market, however, is very good, especially the staple gray forge and foundry and mill irons.

Buyers are going well into the future with their orders, and the furnacemen are advancing the quotations accordingly. For the spring deliveries the quotations on Bessemer are held at not lower than \$14.00, and for immediate deliveries they are unwilling to accept anything lower. Some recent sales have been made at a lower figure, but they are not good representations of what is going on in the market. The appended list shows very fairly the ruling rates:

Gray forge.....	\$12 50/16	12 75
Mill iron.....	12 50/16	13 00
Foundry No. 1.....	14 15/16	14 35
" " No. 2.....	13 15/16	13 35
Bessemer.....	14 15/16	14 25

As will be easily noticed, the improvement is the most strongly marked in Bessemer, which is looked for to keep its grip for a long time to come. Sales during the week included 2,000, 5,000 and 12,000 tons of Bessemer at \$14.25, partial deliveries this month and part after January 1.

Wheeling.

[From our own Correspondent.]

WHEELING, W. VA., November 30.

Those who predicted that before the 1st of December we should see serious contractions in the purchase of pig iron have been doomed to disappointment. These predictions were generally based upon the belief that the result of the recent election would produce uncertainty and uneasiness among buyers and manufacturers, but the results have shown that the iron business was on a firmer basis than even the most sanguine believed. The past month has proven beyond doubt that the prosperity and good feeling that existed in the iron market generally was due to the fact that almost the entire product was being consumed almost as rapidly as it was produced, and that speculation and bolstered and unnatural conditions had nothing or but very little to do with it. It is a fact that buying for future delivery has very largely been decreased to the point where need and possibilities of legitimate trade dictate the halt, but any conservative, careful business man will say that is the proper boundary of trade, and that there is far less danger to both the buyer and seller when these rules prevail.

In the immediate Wheeling district there is no cause whatever for complaint; all the furnaces are working full and all of them have their product disposed of up to the end of the year. Mill irons are still in good demand, and foundry irons find as ready sale as they have for several months. Furnaces that make mill irons especially still ask the advance for deliveries after January, although it is asserted by buyers that some offers of lower prices than those prevailing even in October have been made. There is, however, no warrant for asserting that any change from last week is to be noticed. Everything is steady and firm, and dealers feel secure.

Quotations show no change from last week and are as follows:

No. 1 mill iron.....	\$12 50/16	12 75
Same for future delivery.....	12 65/16	12 85
No. 1 Southern mill iron.....	12 35/16	12 50
No. 1 foundry.....	14 75/16	15 00
No. 2.....	13 75/16	14 00
No. 3.....	13 00/16	13 25
Bessemer.....	13 85/16	14 00

Chicago.

CHICAGO, November 26.

There have been no changes of moment during the past week. Business has been interrupted by the Thanksgiving holiday, but the total amount of sales has been good for this season of the year. Buyers are now largely beginning to postpone further purchasing until after taking yearly inventories of January 1; inquiries are active, notwithstanding. Prices remain virtually

unchanged, but there is greater firmness on the part of leading Southern companies, though here and there small furnaces are found disposed to cut ruling prices a few cents per ton in order to effect sales. This does not indicate general weakness, but merely individual needs and conditions.

On Lake Superior charcoals price is being well maintained. Current sales are based on \$17.00 Chicago for all standard brands.

We quote for cash f. o. b. Chicago:

Southern coke No. 2 foundry.....	\$13 50/16	14 00
" " No. 2 soft.....	13 25/16	13 75

ROGERS, BROWN & MERWIN.

Cincinnati.

CINCINNATI, November 26.

Business has gone on in a somewhat hesitating way during the past week. The volume has been fairly satisfactory, but buyers are evincing a timidity that is natural, perhaps, under the circumstances. The tendency everywhere is toward a conservative course, and this may not be altogether an evil. It is noticeable that on current contracts iron is being taken even faster than specified deliveries. This seems to indicate that in actual consumption there is no abatement. As to the future all seem content to take care of the present and keep in good shape for coming events. It is not likely there will be much new blast furnace construction, and some benefit may result from that.

As to prices, there has been no change since last report. Southern furnaces are holding to regular figures almost without exception. Thus far during November the stocks of the Tennessee Coal, Iron & Railroad Co. have been reduced about 8,000 tons, and would have been reduced 3,000 tons more if sufficient car supply could have been obtained.

The demand continues well distributed through all the different kinds of iron, and while there is no general disposition to contract ahead for next year's deliveries, there are some notable exceptions, and during the week some good-sized contracts were closed up.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry.....	\$13 75/16	14 00
" " No. 2 foundry.....	13 50/16	13 75
" " No. 2 soft.....	12 50/16	12 75
Hanging Rock coke No. 1.....	13 50/16	14 00
" " charcoal No. 1.....	18 50/16	19 50
Tennessee charcoal No. 1.....	16 00/16	16 50
Jackson county stone coal No. 1.....	16 00/16	16 50
Southern coke, gray forge.....	11 50/16	11 75
" " mottled.....	11 00/16	11 25
Standard Alabama car wheel.....	18 00/16	19 00
Tennessee car wheel.....	17 00/16	17 50
Lake Superior car wheel.....	17 50/16	18 00

ROGERS, BROWN & CO.

St. Louis.

ST. LOUIS, November 26.

We quote for cash f. o. b. cars St. Louis:

Southern coke No. 1.....	\$14 50/16	14 75
" " No. 2.....	13 25/16	13 50
" " No. 3.....	12 75/16	13 00
" " gray forge.....	12 25/16	12 50
" " charcoal No. 1.....	16 00/16	16 50
Missouri " No. 1.....	14 50/16	15 00
Ohio softeners.....	16 50/16	17 00
Lake Superior car wheel.....	18 00/16	18 25
Southern " ".....	18 50/16	18 75
Frick's Connellsville foundry coke.....	—	5 65

ROGERS, BROWN & MEACHAM.

Louisville.

LOUISVILLE, November 26.

There has not been much activity to the market during the week under review, but consumption is large and a good run of general orders are reported. In the South gray forge is strong and very difficult to obtain, and is doubtless the strongest grade on the list. Foundry grades are in more abundant supply, but prices on all grades are held firm. There is no excitement in the market, and no material change in prices is looked for in the near future.

HOT BLAST FOUNDRY IRONS.

Southern coke No. 1.....	\$13 50/16	13 75
" " No. 2.....	12 50/16	12 75
" " No. 3.....	12 00/16	12 25
" " charcoal No. 1.....	16 00/16	17 00
" " No. 2.....	15 50/16	16 00

FORGE IRONS.

Neutral coke.....	11 50/16	12 00
Mottled.....	11 00/16	11 25
CAR-WHEEL AND MALLEABLE IRONS.	20 00/16	21 00
Southern (standard brands).....	18 50/16	19 50
(other brands).....	19 50/16	20 50
Lake Superior.....	19 50/16	20 50

HALL BROS. & CO.

Chesapeake & Ohio Steamship Co., Limited.

Negotiations which have been pending for some months between steamship owners and the Chesapeake & Ohio Railroad have at last resulted in the closing of a contract to build six first-class steamers to ply between Newport News and Liverpool, England. The articles of association were signed in London on November 15, and the title of the new organization is "The Chesapeake & Ohio Steamship Co., Limited." The capital is furnished by English capitalists, and the Furness Company, of England, has taken the contract to build and operate the ships. Six first-class steamers are to be put on the line as soon as practicable, and the Chesapeake & Ohio Railroad will have a portion of the stock of the association, while the Furness Company will have a controlling interest. Among the American capitalists are M. E. Ingalls, the president of the Chesapeake & Ohio Railroad, and Decatur Astell, the second vice-president. The steamers of this line will sail weekly from both Liverpool and Newport News and will occupy about ten days on the passage. The line is intended chiefly for freight traffic, but passenger business is likely to become a considerable item.

The Chesapeake & Ohio Railroad has felt the necessity of more direct and larger ocean transportation facilities than is afforded by tramp steamers and sailing vessels, to which the road has furnished freight. In the development of the great lines of the Chesapeake & Ohio an immense amount of grain, lumber and cotton is shipped to Newport News, and the coal and lumber business is growing rapidly, the latter being very valuable, and the new line of the Chesapeake & Ohio, up the Gauley river in West Virginia, is opening up a new lumber territory which will further increase the shipments. The new steamship association will pay particular attention to the shipment of cattle, and as the shipping record of the Furness Line in the past has been first-class in every respect, especially in the shipment of cattle, the receipts from this source are likely to be heavy. The increase in grain is steady, and the Chesapeake & Ohio looks to a large transatlantic business as the resources along the line are developed.

TRADE NOTES.

The Valley Pump Co., of Easthampton, Mass., has just finished two of the largest pumps ever made at their works.

The Morton Safety Heating Co., of Baltimore, has contracted to equip a large number of the cars of the electric line of the West End Street Railway Co., of Boston, with the Morton safety heater.

L. GODFREY, of 26 Exchange Place, Providence, R. I., offers for sale a complete system of mill machinery for making carpet warps, twine and rope. Capacity is about 10,000 pounds per week, and the machinery is in fine condition and able to compete with any mill now making same class goods.

The Bristol Manufacturing Co., of Waterbury, Conn., state that their recording pressure gauge and steel belt lacing business is constantly on the increase. They have just perfected a recording pressure gauge for registering extremely low ranges of pressure, so that they are now prepared to furnish self-recording gauges for all ranges and all kinds of pressure between and including 0 to 4-inch head of water, and 0 to 1,500 pounds per square inch pressure.

A new enterprise has commenced business in Memphis, Tenn., under auspicious conditions. We refer to the Electrical Engineering & Supply Co., which has started in the business of constructing electric work and handling of electric supplies of all kinds in every line. The company has located in a city admirably situated for such a business, and with the lengthy experience and recognized ability of its management in their special field, a promising future is before it. G. U. Borde, formerly district engineer of the Edison General Electric Co. for the entire South, and J. S. Walters, formerly agent of the same company in this section and later of the General Electric Co., comprise the new concern.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Birmingham—Coal and Iron Mining, etc.—A bill has been introduced in the legislature to incorporate the Black Warrior Coal, Iron, Steel & Navigation Co. The company is to have a capital stock of \$100,000, and will mine coal, iron, etc. Joseph E. Cox and Andrew J. Rann, of New York, and Thomas Seddon, Edmund W. Rucker and Charles M. Shelley, of Birmingham, are named as incorporators.

Birmingham—Publishing Company.—A bill has been introduced in the legislature to incorporate the Birmingham News Publishing Co. with Rufus N. Rhodes, E. C. Campbell and E. W. Rucker as incorporators. The capital stock is placed at \$100,000, with privilege of increasing to \$1,000,000.

Deer Park—Saw Mill.—The Babcock Milling Co. will erect a saw mill.

Epes Station—Saw Mill.—J. J. Hilman will rebuild his recently burned saw mill near Epes Station.

Florence—Dye Works and Laundry.—T. J. Dare, of Anniston, will establish a steam laundry and dye works in Florence.

Florence—Electric-light Plant.—The Florence Cotton & Iron Co. has put in an electric-light plant for lighting its furnace.

Florence—Machine Shop.—Government machine shops are being established at Lock 6, Mussel Shoals Canal, near Florence.

Huntsville—Knitting Factory.—A knitting factory may be built in Florence. E. B. Miller can give information.

Mobile—Lumber Mill.—The Cochran Lumber Co. is putting new machinery in its mill.

Mobile—Planing Mill.—The Yellow Pine Lumber Co. will rebuild its planing mill recently burned.

ARKANSAS.

Pine Bluff—Broom Factory.—Isaiah Moore is building a broom factory.

Texarkana—Cement Works.—G. G. Antz, of New Orleans, La., representing Eastern capitalists, has purchased the White Cliffs chalk property near Texarkana. It is said that the erection of a \$2,000,000 cement plant will follow this deal.

FLORIDA.

Apalachicola—Planing Mill.—The Cypress Lumber Co. has put new machinery in its planing mill.

Arvadia—Irrigating Plant.—Lewis Parker is constructing an irrigating plant on Joshua creek, near Arcadia.

Archer—Phosphate Plant.—The Portland Chemical & Phosphate Co. will erect a phosphate plant. L. Taylor is treasurer.

Bartow—Nursery.—Col. R. K. Foote will establish a nursery.

Bartow—Phosphate Mining.—A company, of which E. T. Walter, of Wilmington, Del., is president; Mr. Reynolds, of Atlanta, Ga., vice-president, and G. A. Limestone, of Wilmington, secretary, has purchased \$60,000 worth of phosphate lands in Polk county, and will develop same at once.

Fort Myers—Saw, Planing and Shingle Mills.—The Lee County Commercial & Improvement Co. will erect saw, planing and shingle mills, etc.

Jacksonville—Saw Mill.—J. H. Bugbee is rebuilding his burned saw mill.

Jacksonville—Furniture Factory.—A stock company may be organized to establish a furniture factory. The secretary Board of Trade can give information.

Kissimmee City—Sugar Mills, etc.—H. H. Woodrough, Archibald C. Haynes and R. L. Woodrough will apply for charter for the Osceola Sugar Co. for the purpose of erecting sugar mills, etc. The capital stock authorized is to be \$1,000,000. Jacob E. Heyl will be president; Geo. M. Clemson, vice-president, and John A. Bales-tier, secretary.

Orange City—Water Works.—Fairbanks, Morris & Co. are constructing a water works system for Orange City.

St. Augustine—Cigar Factory.—P. E. Carcaba & Co., of Cincinnati, Ohio, will erect a cigar factory in St. Augustine.

Tampa—Cigar Factory.—Philip Collins will erect a cigar factory.

GEORGIA.

Barnesville—Water Works.—A system of water works will probably be built. The town clerk can give information.

Brunswick—Water Works.—The city will hold an election on December 15 to consider the issuance of \$15,000 of bonds for water works. The mayor can give information.

Buchanan—Saw Mill.—Stewart & Hambrick have rebuilt their lately burned saw mill.

Cedartown—Ice Factory.—C. Philpot is endeavoring to form a company to erect an ice factory.

Cedartown—Saw Mill.—Marchman & Peacock have started a saw mill.

Gainesville—Barrel, Hub and Spoke Factory, etc.—Dozier, Logan & Co. are organizing a company to manufacture spokes, hubs and barrels and deal in timber lands.

Macon—Car Works.—It is stated that the New York Iron Car & Equipment Co. will build car works in Macon. S. A. Charplot is mentioned as to be superintendent of the plant.

Pooler—Harness Factory.—The Pooler Tannery may add a harness factory to its plant.

Rome—Furniture Factory.—A Grand Rapids (Mich.) party may establish a furniture factory in Rome. W. A. Wright can give information.

Savannah—Manufacturing, Supply, etc.—Gustave Fox, W. H. Drew, Henry Urban, F. J. Ruckert and Joseph Sognier have incorporated the Electric Supply & Construction Co. to deal in and manufacture electrical goods, etc. The capital stock is placed at \$5,000, with privilege of increasing to \$100,000.

Savannah—Electric power Plant, etc.—Gustave Fox, W. H. Drew, Henry Urban, F. J. Ruckert and James Seigner have incorporated the Electric & Supply Co. to furnish electric power and lights, etc. The capital stock is \$100,000.

Thomasville—Cigar Factory.—A \$250,000 stock company has been organized by T. C. Mitchell, of Savannah; Manuel Bustamante, of Cuba, and others to erect a cigar factory in Thomasville.

KENTUCKY.

Augusta—Shoe Factory.—A stock company has been formed at Augusta to establish a shoe factory. J. W. Jennings is president, and George T. Kearns, secretary. Charter will be applied for at once.

Covington.—William Thorburn, G. K. Wilhelm and Edwin Scheidler have incorporated the American Family Physician Co.; capital stock \$50,000.

Dayton—Distillery.—The Maddux-Hobart Co. is improving and will operate the Winchester Distilling Co.'s old plant.

Maysville—Shoe Factory.—Messrs. Cosgrove & Rose, of Cincinnati, Ohio, may possibly establish a shoe factory in Maysville.

Middlesborough—Tobacco Factory.—S. L. Morris will establish a tobacco factory.

Middlesborough—Pump Works.—It is said that Racine (Wis.) parties will establish pump works in Middlesborough.

Newport—Carousal and Toy Works.—Edward Leiminger, Herman Berger, G. H. Buescher, C. A. Leiminger, Frank Dejacco and George Bochl have incorporated the American Carousal & Toy Co. to manufacture carousals and wooden toys. The capital stock is placed at \$10,000.

Newport—Stone Quarries.—Walter, Louis, Henry, Albert and Edward Wendt, J. G. Hutchinson and John Rogers have incorporated the Newport Stone Co. to deal in and quarry stone. Their capital stock is \$50,000.

Winchester—Manufacture Cotton and Tobacco Presses.—S. P. Kerr, D. W. Bromley, J. E. Garner, F. H. Dudley and others have incorporated the Winchester Cotton & Tobacco Press Co. to manufacture the Bromley patent tobacco, cotton and hay press. The company's capital stock is \$4,000, its president Mr. Kerr, its vice-president Mr. Dudley and its secretary M. T. McElowney.

LOUISIANA.

New Orleans—Abattoir.—The People's Slaughter-House & Refrigerating Co. has prepared plans for its new abattoir, etc. The plant will cost \$80,000.

New Orleans—Saw Mill.—The Baker Saw Mill Co., Limited, has been incorporated, with a capital stock of \$20,000, to establish and maintain a saw mill.

New Orleans—The New Orleans Excursion & Transportation Co., Limited, has been incorporated with C. C. Piper, president; Joseph Bisso, vice-president, and J. Burkhardt, secretary and treasurer; capital stock \$10,000.

New Orleans—Machinery Dealers.—The F. P. Gravelly Machinery Co., Limited, has been incorporated with a capital stock of \$10,000.

New Orleans—Mercantile Company.—The C. Lee McMillan Co., Limited, has been incorporated to deal in merchandise, etc. The capital stock is \$10,000.

New Orleans.—The Coroyal Transfer Co. has been incorporated.

Plaquemine—Saw Mill.—Wilbert Brothers are erecting a new saw mill.

Slidell—Brick and Tile Works.—The Slidell Brick & Tile Manufacturing Co., recently reported as incorporated, has commenced work on the erection of its plant.

MARYLAND.

Baltimore—Copper Smelting Works.—The Baltimore Copper Smelting & Rolling Co. is considering doubling the capacity of its plant at Canton.

Baltimore—Lime Works.—Julian J. G. McShane, George H. Rodgers, William McShane, Martha P. Webster, Emmeline H. Price and N. Rufus Gill have incorporated the Price Lime Co. to manufacture and sell lime. The capital stock is placed at \$10,000.

Baltimore—Shafting Works.—The H. S. Hires Co. has been organized to manufacture coupling, shafting and other patented articles by H. S. Hires, Edward A. Burke, Thomas C. James, Jno. P. Judge and M. A. McCormick. Their capital stock is \$50,000; office, 706 E. Fayette street.

Baltimore—Sash Factory.—Sunner & Gerlach will rebuild their sash factory reported in this issue as burned.

Baltimore—Machine Works and Factory.—Clendenin Bros. are building new machine works and factory for making soldering cappers.

Baltimore—Machinery Manufacturing, etc.—George Lander Thiel, Wm. P. Clotworthy, John A. Dushane, Wm. S. Rems and others have incorporated the Thiel Combustion Governor & Manufacturing Co. to manufacture machinery, etc. The capital stock is \$50,000.

Elkton—Creamery.—E. W. Dawson will establish a creamery.

MISSISSIPPI.

Buckatunna—Lumber Mills.—The Robinson Land & Lumber Co. has been incorporated with a capital stock of \$250,000 to operate saw and planing mills. The incorporators are George W. Robinson, E. W. Manahan, Edward W. Robinson, Frank G. Robinson and J. D. Cameron.

Callao—Mercantile Company.—F. M. Andrews, James Williams, J. M. Lawrence, H. C. McCabe and others have incorporated the Callao Mercantile Co. to transact a mercantile business. Their capital stock is placed at \$12,000.

Enterprise—Knitting Mill.—A company has been formed with John Kamper, president, to erect a knitting mill.

Gloster—Canning Factory.—The Gloster Canning Co., lately reported, will at once build a plant. W. D. Caulfield is secretary.

Greenville—Bridge.—Bids will be received until January 2 for the building of a pile bridge across Washington bayou on road No. 6. Address C. M. Johnson, clerk.

Jackson.—The Missionary Ridge Farm Co. has been incorporated to maintain truck farms, etc.; capital stock \$25,000.

Strawhorn—Saw Mill.—G. W. Hadden will rebuild his recently burned saw mill.

Woodville—Cotton Mill.—A company is being organized to erect a cotton mill. W. A. Elder can give information.

NORTH CAROLINA.

Concord—Cotton Mill.—A company to erect a cotton mill is being organized. J. W. Burkhead can give information.

Elm College—Cotton Mill.—The Altamahaw Mills are putting in additional machinery.

Fayetteville—Woodworking Factory.—A company has been formed to erect a bent-wood factory in Fayetteville.

Henderson—Electric light Plant.—The city has concluded a contract with the Fort Wayne Electric Co. for lighting. Plant will be put in at once.

Old Fort—Canning Factory.—W. F. Westerman will establish a canning factory.*

Shelby—Flour Mill.—Messrs. Tucker Bros. and A. S. Hood will erect a roller flour mill. Machinery has been purchased.

SOUTH CAROLINA.

Aiken—Cotton Factory.—The Dunkirk Cotton Manufacturing Co. is being organized to erect a cotton factory. T. G. Croft is temporary president, and F. B. Henderson, secretary and treasurer. It is proposed to have a capital stock of \$150,000.

Charleston—Manufacture Fibres.—The Great Southern Fibre Co., capital stock \$50,000, has been incorporated to manufacture fibrous goods.

Columbia—Manufacturing Furniture.—W. D. Turner, J. H. Boatwright, J. G. Morgan, J. M. Wright, Lee Coleman, Jr., and others have incorporated the Johnston Manufacturing & Furniture Co. with a capital stock of \$5,000.

Columbia.—A bill to incorporate the Carolina Farm & Land Co. has been introduced in the State legislature.

Columbia—Chemical Works, etc.—The Columbia Chemical Co. is being organized for the purpose of manufacturing baking powder and chemicals. J. L. Withers can give information.

Columbia—Fur Dealers.—B. B. McCreery, Jr., and T. M. Elwell have incorporated the Palmetto Fur Co. to deal in furs.

Columbia.—Bills have been introduced in the legislature to incorporate the Deep Water Terminal Co., the Commercial Manufacturing Co., and the Indianola Manufacturing Co.

Edgefield—Water Works.—A bill has been introduced in the legislature to authorize the town of Edgefield to ordain the necessary ordinance for the establishment, construction and maintenance of a system of water works and to issue bonds for that purpose.

Greenville—Electric-power Plant.—A bill to incorporate the Isabel Power Co. has been introduced in the State legislature. Frank Hammond, W. J. Thackston and A. G. Furman are mentioned as incorporators. The company's intention is to furnish electric-power.

Hartsville—Publishing Company.—E. S. Lucas, R. A. Matthews, D. H. Wadsworth, W. V. Moore and others have incorporated the Hartsville Publishing Co. for the purpose of transacting a printing and stationery business.

Sumter—Water Works.—Edward F. Partridge, Joseph W. Hawley, William S. Perot, Jr., Joseph S. Keen, Jr., and H. B. Hodge, all of Pennsylvania, have incorporated the Sumter Water Co. with a capital stock of \$65,000.

Yorkville—Water Works.—The city will build a system of water works. Address the mayor.*

TENNESSEE.

Chattanooga—Publishing Company.—Charles Reif, Frederick Lieker, J. Hy. Schmidt, Julius C. Kloenne and others have applied for charter for the Chattanooga German Pioneer Co. to publish a German newspaper.

Cleveland—Lead Mine.—C. L. Hardwick and associates will develop a lead mine.

Humboldt—Spoke Factory.—The Southern Spoke Co. is enlarging and otherwise improving its factory.

Jackson—Plow Works.—J. I. Wells's Sons will rebuild their plow works reported in this issue as burned.

Jackson—Woollen Mill.—The Jackson Woollen Mill has been incorporated by Howell E. Jackson, Robert A. Allison, L. J. Brooks and others to operate a woollen mill. The capital stock is \$55,000.

Memphis—Tobacco Factory.—J. W. Hopkins and others, of Louisville, Ky., will erect a tobacco factory in Memphis.

TEXAS.

Belcherville—Coal Mines.—Joel P. Webber, of St. Louis, Mo., will open coal mines at Harrisonia, near Belcherville.

Bryan—Grist and Planing Mill, etc.—G. S. Parker will rebuild his grist mill, planing mill and cotton gin reported in this issue as burned.*

Calaveras—Bridge.—The commissioners' court has let contract for the construction of an iron bridge over the San Antonio river at Calaveras.

Dallas—Manufacture Cotton Gins.—F. F. Holland, William Burrand and S. D. Murray have incorporated the Murray Ginning System Co. for the purpose of manufacturing cotton gins and ginning machinery. The capital stock is placed at \$25,000.

Goldthwaite—Ferry Company.—J. H. Randolph and others have incorporated the Colorado Ferry Co.

Houston—Manufacturing, etc.—The Gill Manufacturing Co. has been incorporated by Leonard Gill, John Woodhead and R. C. Tipps with a capital stock of \$10,000.

Lavernia.—Iron Bridge.—The commissioners' court has let contract for the construction of an iron bridge over the Cibola river at Lavernia.

Longview.—Electric-light Plant.—Charter and franchise for electric-light works has been granted to the Electric Light & Power Co. by the city. The plant will be built at once.

New Braunfels.—Electric-light and Power Plant. The Landa Electric Light & Power Co. has contracted for the erection of a plant to be installed immediately.

Paris.—Ice Factory.—The Paris Ice Co., reported week before last as incorporated, has a plant in operation already, having previously conducted business as the Arctic Ice & Refrigerating Co.

Waco.—Express Company.—The Waco and the Ennis Express Companies have consolidated and incorporated as the Ennis-Calvert Express Co. with a capital stock of \$150,000.

VIRGINIA.

Alexandria.—Manufacturing Car Couplers.—The Van Dorsten Railway Supply Co., for manufacturing car couplers, has been incorporated with a capital stock of \$1,000,000.

Alexandria.—Onyx Quarries.—The New Pedra Onyx Co. has been incorporated to operate onyx quarries, etc. The capital stock is \$1,000,000.

Bridgewater.—Flour Mill.—George W. Berlin is improving and remodeling his flour mill to the roller system.

Buchanan.—Bath-tub Works.—The Central Land Co. is negotiating with New York parties for the establishment of a plant for making porcelain tubs, bath-tubs, etc.

Charlottesville.—Knitting Mill.—The Armstrong Knitting Mill will put in new machinery.

Lynchburg.—Mercantile Company.—W. H. H. Winston, of Anheist; T. L. Mosby, of Bedford; Milton Isbell, of Appomattox, and others have incorporated the Farmers' Alliance District Exchange with a capital stock of \$5,000.

Newport News.—Ice-machine Works.—E. C. Hillyer & Co. will erect a new machine shop. Contract has been let.

Newport News.—Ice Factory.—The Crystal Ice Co., reported last week as organized, will erect an ice factory. Outfit of machinery will be furnished by E. C. Hillyer & Co.

Newport News.—Land Company.—The Mechanics' Land Co. has been incorporated with a capital stock of \$50,000.

Norfolk.—Mercantile Company.—The New York Commercial Co. has been incorporated with a capital stock of \$2,500,000.

Norton.—Coal Mine and Coke Plant.—The Big Stone Gap Colliery Co. is opening a coal mine and will erect ovens.

Palmyra.—Talc Mill.—The Rivanna Talc Mining & Manufacturing Co. has purchased and will operate the Palmyra talc mill.

Radford.—Steel Bridge.—The city will receive bids on iron or steel bridge about 200 feet long and seventy feet high. G. T. Kearsley, chairman street committee.

Richmond.—Yeast Factory.—The Fulton Yeast Co. has been organized with William A. Parrish as president and George M. Rogers, general manager, and is erecting a yeast factory in Fulton.

Richmond.—Brick and Tile Works.—The Fulton Brick Co. has been incorporated to manufacture brick and tile with a capital stock of \$100,000.

Roanoke.—The Virginia Houston Narcotic Cure Co. has been incorporated. J. M. Gambill is president, and Jas. O. Hobbs, secretary; maximum capital \$25,000.

Roanoke.—Electric Lighting.—The city has awarded contract for electric lighting to W. H. McKay, with option of purchasing the plant in five years. The mayor can give further particulars.

WEST VIRGINIA.

Bayard.—Coal Mines and Coke Ovens.—The Bayard Coal & Coke Co. has been incorporated.

Davis.—Saw Mill.—Frank Thompson will erect a saw mill.

Huntington.—Coal Mining.—S. S. Vinson, of Ceredo, and others have incorporated the Logan Cannel Coal Co.

West Virginia.—Coal Mines and Coke Ovens.—The Ashland Coal & Coke Co. has been incorporated to mine coal and manufacture coke with a capital stock of \$200,000.

Wheeling.—Publishing Company.—John Frew, A. W. Campbell, C. B. Hart, R. C. Campbell, J. K. Hall and others have incorporated the Intelligence Publishing Co. to publish the *Intelligencer*.

Wheeling.—W. A. McLaughlin and others, of Cleveland, Ohio, have incorporated the National Union Photo-Engraving Co. with a capital stock of \$12,000.

BURNED.

Atlanta, Ga.—The Atlanta elevator; loss \$10,000.

Baltimore, Md.—Sunner & Gerlach's sash factory.

Barnwell, S. C.—The Barnwell Oil and Fertilizer Mill; loss \$20,000.

Bryan, Texas.—G. S. Parker's cotton gin, grist mill and planing mill.

Epes Station, Ala.—J. J. Hilman's cotton gin and saw mill, near Epes Station.

Gainesville, Texas.—W. H. Parkin's cotton gin.

Georgetown, D. C.—The Chesapeake & Ohio Canal Co.'s workshops, near Georgetown.

Green Hill, Tenn.—Michael Williams's cotton gin.

Jackson, Tenn.—J. I. Wells's Sons' plow factory.

Lynchburg, Va.—Wright & Craighill's tobacco-fertilizer works, W. A. Heffernan's stained-glass works, S. P. Halsey's tobacco factory and Dunlap, Stokes & Co.'s two tobacco factories.

Manor, Texas.—John Diebel's cotton gin.

Monroe, La.—Mr. Filhirl's cotton gin and grist mill.

Mount Vernon, Ga.—Henry Odam's cotton gin.

Newnan, Ga.—The Newnan Buggy Co.'s plant.

Strawhorn, Miss.—G. W. Haddon's saw mill.

Vicksburg, Miss.—Ben Guider's cotton gin, near Vicksburg.

Winston, N. C.—George T. Little's cotton gin and grist mill.

BUILDING NOTES.

Americus, Ga.—Hon. Charles F. Crisp will secure plans for a new residence.

Athens, Ga.—A building to cost not more than \$10,000 will be erected in the spring for the Athens Industrial Home. W. W. Thomas is the architect. Mrs. H. C. White, president, can be addressed.

Baltimore, Md.—Office Building.—Geo. Bunnick & Sons have been awarded contract for the four-story office building for Lawrence Turnbull. Charles E. Cassell prepared the plans.

Baltimore, Md.—Office Building.—The Maryland Life Insurance Co. expects to erect an office building at a later date.

Birmingham, Ala.—College.—The North Alabama Educational Society of the Methodist Episcopal Church will build a college at some point in North Alabama.

Bowling Green, Fla.—Church.—The Church of the Disciples will erect a wooden church 30x40 feet to have a 65-foot spire. John Hufbauer prepared the plans. Rev. S. R. Woods can be addressed.

Clinton, Tenn.—College.—W. Chamberlin & Co., of Knoxville, Tenn., will furnish plans for a college to be built at Clinton by the Knights of Pythias. It will include eleven class rooms, chapel, laboratory, four society halls, lodge room, offices, etc.

Coquina, Fla.—Hotel.—A company has been formed, it is stated, to build a hotel on the Indian river at Mt. Elizabeth.

Goldboro, N. C.—Warehouse.—The Goldboro Storage & Warehouse Co. has awarded contract for the erection of a brick warehouse.

Hot Springs, Ark.—Hotel.—The hotel being built by the Thompson-Decker Construction Co., of Birmingham, Ala., for the Arlington Hotel Co., previously mentioned, will be a six-story structure, 200x250 feet, of brick, granite and marble. It will have three steam passenger elevators, fire escapes, electric bells, automatic sprinklers, laundry fixtures, arc and incandescent lighting, etc. Stewart, McClure & Mulgardt, of St. Louis, Mo., prepared the plans, and the cost will be about \$300,000.

Houston, Texas.—Warehouse.—R. P. Smith will erect at once a warehouse 125x125 feet for the use of Smith, Peden & Co., wholesale dealers in iron, etc.

Jacksonville, Fla.—Warehouse.—Robinson & Selden will build the warehouse lately credited to F. M. Robinson. It will be a three-story brick structure, 75x120 feet, and be supplied with power elevators.

Knoxville, Tenn.—W. L. Ross will build a \$12,000 residence to be modern in all appointments.

New Decatur, Ala.—Courthouse.—Lawrenson & Wallen have been awarded contract at \$40,000 for building the courthouse lately mentioned. It will be a two-story-and-basement building, 111x75 feet, of stone and brick, and have steam-heating apparatus, clock, etc. W. Chamberlin & Co., of Knoxville, Tenn., prepared the plans.

Norfolk, Va.—Hotel.—Louis Mangialetto is building a three-story hotel, 72x25 feet, at Lambert's Point; also a number of cottages.

Pine City, Ga.—Hotel.—C. A. Creager will prepare plans for the 52-room hotel to be built by the Pine City Tropical Home Co., mentioned in last issue. The building will be 90x90 feet and cost from \$15,000 to \$20,000.

Plaquemine, La.—Jail.—Bids will be received until December 10 for rebuilding the new jail for Iberville parish. It will cost about \$10,000. The president of the police jury can be addressed.

Roanoke, Va.—College.—George Ware has been awarded contract for the four-story building to be erected by Dr. W. A. Harris, of Staunton, for the Virginia College for Young Ladies. The

building will have a frontage of 228 feet, with two wings each 106 feet; have heating apparatus, electric lights, etc., and cost about \$35,000. Wilson & Huggins prepared the plans.

Savannah, Ga.—Theatre.—Manager Johnson is arranging for the remodeling of his theatre.

Staunton, Va.—Hotel.—The proposed \$60,000 hotel is now almost assured. Architect Collins will furnish the plans.

Tampa, Fla.—John O. Ball & Co. will build a three-story brick block to cost, including lot, \$50,000.

Washington, D. C.—J. H. Grant will erect two three-story dwellings to cost \$11,000; Denson & Schneider have prepared plans for five three-story dwellings, to have electric lights, etc., and cost \$25,000; also for a three-story residence to have steam heat, electric lights, etc., and cost \$12,000; Charles Campbell will erect a three-story store and flat building 50x69 feet to be heated by steam, etc., and cost \$25,000—H. L. Page prepared the plans.

Winston, N. C.—R. R. Crawford, Vaughn & Co., T. R. Pepper, J. C. Buxton and the Messrs. Hanes contemplate erecting business buildings in the spring.

Winston, N. C.—Hotel.—The Hotel Zinzendorf, lately burned, will be rebuilt as early as practicable. Plans have not yet been decided on, but the cost will probably be over \$100,000.

Winston, N. C.—Warehouse.—Abbott & Jones have let contract for the erection of a large tobacco warehouse.

RAILROAD CONSTRUCTION.

Baltimore, Md.—Electrical Railroad.—Baltimore county has granted franchise to the Edmondson Avenue, Catonsville & Ellicott City Electric Railway Co. to build its tracks on certain roads.

Bowie, Texas.—Railroad.—It is reported that the Chicago, Rock Island & Pacific Railroad Co. (office, Chicago, Ill.) has awarded contract for the grading, bridging and tracklaying for its road from Bowie to Springtown. It is said that other sections will be let as fast as location is made and right of way secured, and the road built to Fort Worth.

Cleveland, W. Va.—Railroad.—The Kanawha & Buckhannon River Railroad Co. has been incorporated by R. E. McQuay, of Buckhannon, and others. The road is to be built from Lane's Station, on the West Virginia & Pittsburgh Railroad, in Upshur county, to a point at or near Cleveland, in Webster county. The capital stock is \$200,000.

Gurley, Ala.—Railroad.—The Gurley & Paint Rock Valley Railroad Co. will, it is stated, soon resume work on its road and push same to completion.

Harriman, Tenn.—Railroad.—Alfred E. P. Rockwell, president of the proposed Harriman & Port Royal Railroad, writes that surveys are completed for the road with the exception of fifteen miles.

Hot Springs, Ark.—Electrical Railroad.—S. W. Fordyce has, it is stated, arranged for changing the Hot Springs Street Railway into an electrical railroad, and work will begin within sixty days.

Mobile, Ala.—Belt Railroad.—The Mobile Transportation Co. proposes building a belt railroad.

Montgomery, Ala.—Railroad.—A bill has been introduced in the legislature incorporating the Alabama & Gulf Railroad, with J. F. Dennis, E. A. Graham and H. G. McCall, incorporators. The road is projected to run from Montgomery in a southerly direction to some point on the Alabama-Florida State line in Geneva or Covington county. The capital stock is \$100,000.

Montgomery, Ala.—Railroad.—A bill has been introduced in the legislature incorporating the Montgomery & Southeastern Railroad, with B. H. Walker, E. A. Graham and H. G. McCall as incorporators. The road is projected to run from some point in or near the city of Montgomery to some point on the Georgia-Alabama State line in Henry county. The capital stock is \$100,000.

New Orleans, La.—Street Railway.—The Canal & Audubon Street Railway Co. has been incorporated by Ronald T. McDonald, M. J. Hart, S. J. Hart, T. J. Rodgers and P. Roynes. The capital stock is \$2,000,000.

North Galveston, Texas.—Railroad.—The La Porte, Houston & Northern Railway Co., which is building a railroad from La Porte to Houston, a distance of twenty-two miles, and the North Galveston, Houston & Kansas City Railroad Co., which is building a railroad from Virginia Point to North Galveston, have arranged to connect their roads, thus forming a continuous line from Virginia Point to Houston. The North Galveston Company is to build to the north bank of Clear creek, where the La Porte road will be met.

Pickens, Ga.—Railroad.—J. H. Burckhalter, of Augusta, Ga., who is building the Pickens Railroad, writes that the line is all graded, cross-tied and trestled, and arrangements are soon to be made for steel rails and equipment.

Pineville, Ky.—Railroad.—J. D. Blake, general manager of the West Virginia, Pineville & Tennessee Railroad Co., writes to the MANUFACTURERS' RECORD that the company is grading a

small portion of its road southward and expects to construct within the next few weeks an extension of about a mile up the right fork of Straight creek to accommodate the coal operations now commencing there. The company will build eight or ten miles more next season up the left fork of Straight creek to afford facilities to the coal and lumber operations in that direction.

Savannah, Ga.—Railroad.—Contract for building the Florida Central & Peninsular Railroad Co.'s (office, Jacksonville) extension from Hart's Road, Fla., to Savannah, has been awarded to the New York Construction Co. The contract provides for 70-pound steel rails and steel bridges, and the completion of the work by September 1, 1893.

Stillmore, Ga.—Railroad.—H. J. Biddenback, secretary of the Stillmore Air Line Railway, reported in last issue as to be built from Collins via Stillmore to Swainsboro, writes that half of the line from Collins to Stillmore, a distance of twenty miles, is now in operation, and the remainder is nearly ready for the rails, which are due by December 10. The road from Stillmore to Swainsboro, a distance of twelve miles, will be pushed to completion. By the construction of this road the railroad distance to Savannah from Stillmore, which is at present 111 miles, will be reduced to eighty miles.

Sunbright, Tenn.—Railroad.—Steps are being taken to secure the building of a railroad from Sunbright to Careyville.

Texarkana, Ark.—Railroad.—W. L. Whitaker, president of the Texarkana & Fort Smith Railroad, has, it is stated, interested Eastern parties in the road, who will provide funds for completing it to Fort Smith on condition that the citizens donate a bonus of \$10,000. The road now runs from Texarkana to Little river, a distance of twenty-eight miles. The distance from Texarkana to Fort Smith is 118 miles.

Vicksburg, Miss.—Electrical Railroad.—The electrical railroad franchise granted C. R. McFarland, E. F. Fuller and others in September, has been transferred to Mr. McFarland alone, who expects to commence construction by February 1, 1893.

MACHINERY WANTED

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Bakery Machinery.—F. Lane, Port Tampa City, Fla., wants to purchase an oven.

Belting.—John J. Lafferty, Crozet, Miss., wants belting.

Boiler.—T. J. Asher, Wasioto, Ky., wants to buy a second-hand tubular boiler eighteen feet long by sixty inches in diameter.

Boiler.—The City Electric Light Co., Charleston, W. Va., wants a 90 to 100 horse-power return-flue boiler, with stack, etc., second-hand, in good condition.

Boiler.—The Big Stone Gap Colliery Co., Big Stone Gap, Va., is in the market for boilers. Address Joseph H. Allen, president.

Boiler.—G. S. Parker, Bryan, Texas, will be in the market for a boiler.

Boilers.—The Big Stone Gap Colliery Co., Norton, Va., will need boilers.

Boiler and Engines.—R. O. Clark, East Berlin, Conn., wants a second-hand portable six horse-power engine and boiler.

Canning Factory.—The Gloster Canning Co., Gloster, Miss., will purchase entire outfit for factory.

Canning Machinery.—Manufacturers of canning machinery should address W. E. Westerman, Old Fort, N. C.

Cars.—J. H. Burckhalter, Augusta, Ga., wants a second-hand combination coach, one box and one flat car.

Cars.—The Delbert Engineering Co., New Orleans, La., wants prices on 200 cars for sugar plantation work.

Cotton Gin.—G. S. Parker, Bryan, Texas, will buy outfit for cotton gin.

Cotton Mill.—D. P. Ferguson, Sparta, Ga., wants to purchase outfit for a 2,500-spindle cotton-yarn mill, second-hand.

Cotton Mill.—H. G. Carrison, president and treasurer of Camden Cotton Mills, Camden, S. C., will be in the market for cotton mill outfit in the spring.

Crushers.—The Big Stone Gap Colliery Co., Big Stone Gap, Va., is in the market for coal crushers. Address Joseph H. Allen, president.

Drill.—Sprout, Waldron & Co., Muncy, Pa., are in the market for a 60-inch radial drill.

Engine.—The Big Stone Gap Colliery Co., Big Stone Gap, Va., is in the market for an engine. Address Joseph H. Allen, president.

Engine.—G. S. Parker, Bryan, Texas, will be in the market for an engine.

Engines.—The Big Stone Gap Colliery Co., Norton, Va., will need engines.

Grist Mill.—G. S. Parker, Bryan, Texas, will buy outfit for grist mill.

Heating Apparatus.—W. J. Anderson, Concord, N. C., desires to communicate with manufacturers of heating apparatus.

Locomotive.—The H. Dudley Coleman Machinery Co., Limited, New Orleans, La., wants a second-hand pole-road engine (6-foot gauge) for logging purposes.

Locomotive.—J. H. Burckhalter, Augusta, Ga., wants a second-hand 26 or 30-ton standard-gauge locomotive.

Locomotive.—The Franklin & Abbeville Railroad Co., Franklin, La., will probably purchase a locomotive.

Phosphate Plant.—The Portland Chemical & Phosphate Co., Archer, Fla., wants to contract for the erection of a plant to crush, wash, screen and roast 100 tons of phosphate rock daily. Address L. Taylor, treasurer.

Planing Mill.—G. S. Parker, Bryan, Texas, will buy outfit for planing mill.

Pulleys.—John J. Lafferty, Crozet, Va., wants pulleys.

Pump.—G. S. Parker, Bryan, Texas, will be in the market for a pump.

Pumps.—The Big Stone Gap Colliery Co., Norton, Va., will need pumps.

Rails.—The Delbert Engineering Co., New Orleans, La., wants prices on about two miles of light rails.

Rails, etc.—J. H. Burckhalter, Augusta, Ga., wants to purchase on easy terms 500 tons of second-hand 35 or 40-pound steel rails, with equipment for laying same.

Shafting, etc.—John J. Lafferty, Crozet, Va., wants shafting, ball and socket, self-adjusting boxes, etc.

Spring Machinery.—F. A. Ordway, Aberdeen, N. C., wants to correspond with manufacturers of machinery for manufacturing woven-wire spring beds.

Stave Machinery.—The Hardwood Stave Co., J. M. Johnson, secretary and treasurer, Fordsville, Ky., wants to buy a slack-barrel stave cutter and equalizer.

Stoneworking Machinery.—The Cameron & Barkley Co., Charleston, S. C., is in the market for a rubbing bed ten feet diameter, complete with spider shaft and pulleys; also polishing machine for stonecutter work.

Water Works.—J. L. Ludlow, C. E., Winston, N. C., will likely want to contract for a water works system about January 1.

Water Works.—The city of Yorkville, S. C., having obtained the necessary legislation for a water supply for the city, wishes to communicate with contractors. Address T. F. McDow, mayor.

J. H. Hanes, of Winston, N. C., wants to purchase a steam fire engine and outfit for a hook and ladder company.

Mr. H. H. Green, of Charlestown, W. Va., wants to purchase 500 whiskey barrels.

P. W. Anderson, of Princeton, W. Va., wants to correspond with manufacturers of vitrified brick.

S. H. Phelan, of Atlanta, Ga., wants the addresses of steam plow manufacturers.

The Cameron & Barkley Co., Charleston, S. C., wants a good second-hand safe about three feet wide and five feet high.

The general secretary of the Young Men's Christian Association of Sumter, S. C., wants to purchase a gymnasium outfit.

SOUTHERN FINANCIAL NEWS.

New Banks.

Bastrop, La.—The Bastrop State Bank has been organized with James Bussey, president; Samuel Wolff, vice-president, and A. B. Marks, cashier. It will commence business about January 1. The capital stock is \$50,000.

Columbia, S. C.—A bill has been introduced in the legislature to incorporate the Columbian Banking & Trust Co.

Glasgow, Ky.—The First National Bank of Glasgow will shortly commence business with G. C. Young, president, and W. B. Smith, cashier. The capital stock is \$50,000.

Jasper, Fla.—The First National Bank of Jasper will probably soon be organized.

Paducah, Ky.—The corporate existence of the American-German National Bank of Paducah has been extended to November 30, 1912.

Sistersville, W. Va.—The Tyler County Bank referred to in last issue was chartered by A. C. Jackson, E. A. Durham, J. T. Jones and others.

It will soon commence business. The capital stock is \$25,000.

Atlanta, Ga.—A bill has been introduced in the legislature to authorize and direct the governor and treasurer to issue State bonds to the amount of \$368,000 to pay off the portion of the public debt maturing in 1893.

Atlanta, Ga.—A bill has been introduced in the legislature authorizing the mayor and general council to issue \$250,000 of new water works bonds.

Barnesville, Ga.—The town will hold an election on December 15 to vote the issuance of \$15,000 of 6 per cent. bonds.

Bel Green, Ala.—A bill has been introduced in the legislature authorizing Franklin county to issue \$30,000 of courthouse bonds. The county clerk can be addressed.

Birmingham, Ala.—A bill will be introduced in the legislature authorizing the issuance of \$100,000 of 30-year 6 per cent. bonds. The proceeds are to be applied to the liquidation of the floating debt of the city, the refunding of certain 8 per cent. bonds, etc.

Goldshoro, N. C.—The North State Lumber Co. has executed a mortgage to the Baltimore Trust & Guarantee Co. to secure an issue of \$100,000 of bonds.

Graham, Va.—The Bank of Graham has declared a dividend of 4 per cent.

Key West, Fla.—P. A. Williams, receiver of the Bank of Key West, is paying a second dividend of 15 per cent. to depositors.

Middlesborough, Ky.—W. E. Cabell, receiver of the People's Bank, will shortly pay a dividend on claims proven.

Montgomery, Ala.—A bill has been introduced in the legislature authorizing the Board of Revenue of Montgomery county to issue \$300,000 of road and bridge bonds.

Portsmouth, Va.—The First United States Excelsior Building Association, of Portsmouth, has been incorporated, with A. S. Watts, president. The capital stock is \$500,000.

Rusk, Texas.—F. W. Bonner & Sons, bankers, have executed a deed of trust to Thos. Finity, Jr., to secure their creditors. The assets approximately \$150,000 and liabilities \$65,000.

Spartanburg, S. C.—The Home Building and Loan Association has been organized with A. H. Twichell, president.

Spartanburg, S. C.—The Spartan Mills have declared a dividend of 3 per cent.

Wilmington, N. C.—Two dividends of 15 per cent. each have been paid to the creditors of the First National Bank of Wilmington. The nominal assets are about \$720,000, consisting largely of worthless notes and bills extending over a number of years, which were kept alive by renewals. The capital stock is \$250,000, upon which an assessment of \$100 per share has been levied and about half of this collected. The liabilities are about \$550,000, and it is thought that 30 per cent. more will be paid to creditors within the next two years. W. S. O'B. Robinson is the receiver.

TRADE NOTES.

THE woodworking shops of the Richmond, Fredericksburg & Potomac Railroad, which was recently destroyed by fire, is being rebuilt and is now nearly completed. The bulk of the order for the woodworking machinery was placed with the Smith-Courtney Co., of Richmond, Va., manufacturers' direct agents for a full line of wood and iron-working machinery.

H. BREWER & Co., of Tecumseh, Mich., manufacturers of clay-working machinery, have recently made shipments of their machines to Waterloo, Iowa, Augusta, Ga., Bibbville, Ala., Caslinville, Ill., and Charlotte, N. C. They have on hand some orders that call for prompt shipment, one being a complete outfit for Summerville, S. C. Messrs. H. Brewer & Co. write us: "We never did such a safe and satisfactory business as during the present year."

THE Rust Well Machinery Co., of Ithica, N. Y., successors to the Rust Artesian Well Works, shipped during the past week a mounted steam well-boring rig to Indiana, a mounted horse-power rig to Michigan, and another to Missouri. They have just received an order from Keim & Sons, of Pittstown, Pa., for a 1,000-foot well machine to be used in finishing a well for the Crystal Ice Works at Harrisburg, Pa. They have also taken a contract amounting to \$5,000 for a well at Guttenberg, N. J., upon which they will commence work shortly, their machinery now being on the ground.

THE B. F. Sturtevant Co., of Boston, has purchased the four-story building No. 135 North Third street, Philadelphia, the basement and first floor of which has heretofore been occupied by the company. The store is being refitted and a full line of the different Sturtevant machinery is being put in stock. The loft is being fitted up with a sheet-iron department, where it is proposed to make the sheet-iron piping used with

the Sturtevant blowers, heating and ventilating apparatus in Philadelphia and vicinity. Mr. C. H. Gifford, who has been connected with the company at Boston for fifteen years, will be in charge of the Philadelphia branch.

THE improved standard anchor plates and post caps for self-releasing beams made by P. Duvinage & Co., of Brooklyn, N. Y., are achieving notable popularity among leading architects, and this contrivance is steadily increasing its use. The manufacturers are introducing this valuable building adjunct in the South, and if the demand in the North is a criterion, the favors to be received from the South will tax their capacity. Among the buildings equipped with these anchor plates and post caps during the last two months: New York city, three apartment houses and a church, Lewis F. Bach's warehouse, residence on Madison avenue, architects Carrere & Hastings; Steinway, L. L., Oakes Manufacturing Co.'s factory; Brooklyn, N. Y., Peter Young's new bag factory; Lansingburgh, N. Y., Consolidated Brush & Novelty Co.'s factory, and Patterson, N. J., Kearney & Foot File Co.'s building.

OFFICE OF

THE RICHMOND AND DANVILLE UNDERLYING BONDHOLDERS' COMMITTEE,

208 EAST GERMAN STREET.

BALTIMORE, MD., Nov. 25, 1892.

LOUIS FITZGERALD, Esq., President of the Mercantile Trust Company (of New York), has this day been appointed a member of the RICHMOND AND DANVILLE UNDERLYING BONDHOLDERS' COMMITTEE, and THE MERCANTILE TRUST COMPANY (OF NEW YORK) has been designated as an additional DEPOSITORY FOR BONDS.

Copies of the circular of the Committee and of the agreement under which Bonds have been called in, will be furnished on application to said Trust Company, which will receive bonds for deposit under the agreement and issue therefor certificates prepared in accordance with the requirements of the New York Stock Exchange.

J. WILLCOX BROWN,
Chairman.

\$60,000

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DUE 1920.

INTEREST PAYABLE APRIL AND OCTOBER, IN NEW YORK CITY.

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PRICE, 97 AND ACCRUED INTEREST.

Jackson is one of the five principal cities of Tennessee, Nashville, Memphis, Chattanooga and Knoxville coming first in the order named. It was incorporated in 1836, is situated in the midst of a magnificent agricultural country about the center of Western Tennessee, at the junction of the Illinois Central, Mobile & Ohio, and Tennessee Midland Railways, and has for years past been a place of considerable business and importance. Its present population is about 12,500, and its growth has been positive and steady.

Assessed value taxable property.....\$2,846,000
Estimated actual value.....7,000,000
Bonded debt, including bonds issued for water works.....355,000

The city owns its splendid system of water works, which, with other property likewise owned, exceeds in value the entire bonded indebtedness of Jackson. The bonds issued for the construction of the water works system are not secured by mortgage on the works. Hence this valuable asset is security for all the bonds of the city alike.

Annual revenue of Jackson.....\$73,036
Interest on bonds.....20,550

Leaving for current expenses and sinking fund.....\$52,486

It is estimated that the net revenue of the water works and sewer system alone at present rate of interest will in a few years be sufficient to pay interest on entire bonded debt of the city after furnishing water to the city for her own uses free of charge.

The city of Jackson enjoys an unblemished credit, and has never defaulted in the payment of principal or interest on any of its debts.

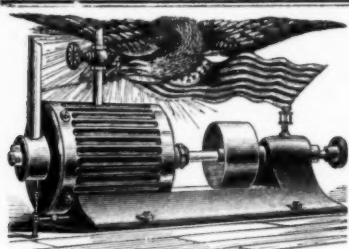
The legal status of these Bonds has been fully examined and approved by our counsel, Messrs. Venable & Packard, of Baltimore.

Any additional information desired may be obtained either by addressing us direct or by applying to our Baltimore correspondents.

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Corner Tenth and Main Streets, Richmond, Va.
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PROPOSALS.

NOTICE—Treasury Department, Office Supervising Architect, Washington, D. C., November 25, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 23d day of December, 1892, and opened immediately thereafter, for all the labor and materials required for the Trench Excavation, Concrete and Stone Footings, Cut Stone and Brick Work of the basement and area walls of the U. S. Postoffice, Courthouse and Custom-House at Milwaukee, Wis., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at Milwaukee, Wis. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked "Proposal for the Trench Excavation, Concrete and Stone Footings, Cut Stone and Brick Work of the Basement and Area Walls for the U. S. Postoffice, Courthouse and Custom-House at Milwaukee, Wis." and addressed to W. J. EDBROOKE, Supervising Architect.

TREASURY DEPARTMENT Office Supervising Architect, Washington, D. C., November 25, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 23d day of December, 1892, and opened immediately thereafter, for all the labor and materials required for the excavation, foundations, stone and brick work, floor and roof construction, roof covering, etc., for the U. S. Custom House and Postoffice Building at St. Albans, Vermont, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at St. Albans, Vermont. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid, if it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the excavation, foundations, stone and brick work, floor and roof construction, roof covering, etc., for the U. S. Custom House and Postoffice Building at St. Albans, Vermont," and addressed to W. J. EDBROOKE, Supervising Architect.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., November 19th, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 23d day of December, 1892, and opened immediately thereafter, for all the labor and material required for the excavation, foundations, stone and brick work, floor and roof construction, roof covering, etc., for the U. S. Custom House and Postoffice Building at St. Albans, Vermont, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at St. Albans, Vermont. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid, if it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the excavation, foundations, stone and brick work, floor and roof construction, roof covering, etc., for the U. S. Custom House and Postoffice Building at St. Albans, Vermont," and addressed to W. J. EDBROOKE, Supervising Architect.

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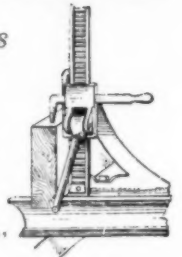
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Care MANUFACTURERS' RECORD.

Rails at a Bargain.

We own and offer For Sale cheap 450 tons of Selected Second-Hand, 30 lb. IRON RAILS in Chester County, Pa., all in good condition; also 132 tons of New, First Quality, 50 lb. STEEL RAILS at Steelton, Pa. Write or wire us.

ROBINSON & ORR,

419 Wood Street, PITTSBURGH, PA.

ESTABLISHED 1855.

GEORGE PLACE.

Late George Place Machinery Co.

Equipment of Railway & Car Works

EQUITABLE BUILDING,

120 Broadway, NEW YORK

STEEL RAILS.

New and Second-Hand.

WM. MINNIGERODE, Lynchburg, Va.

OLD RAILS.

2,000 tons 53-pound Steel, 400 tons 35-pound Iron, 200 tons 30-pound Iron, all good order, with splices. Two six-driver, 3-ft. gauge Engines. Four standard gauge Freight Engines.

SOUTHERN IRON & EQUIPMENT CO.

67 Old Capitol Building, ATLANTA, GA.

TEE AND STREET RAILS,
SPICE BARS, TRACK
BOLTS AND NUTS,
R. R. SPIKES

FROGS, CROSSINGS,
SWITCHES AND FIXTURES,
IRON AND STEEL AXLES,
CAR TRUCK CHAIRS,
WROUGHT IRON TURN-
BUCKLES, LANKS AND
FISH AND CAR COUP-
LERS.

BAR IRON AND STEEL,
SHEET IRON AND STEEL,
CORRUGATED IRON.

STEAM SHOVELS,
BALLAST UNLOADERS,
AND STEAM CRANES

LOCOMOTIVE AND CARS OF
ALL KINDS.

A. T. SHOEMAKER,

Railroad Supplies

and Equipment.

(New and Second Hand.)

118 BROADWAY, NEW YORK.

Rails, Saws and Drills.

STEEL RAILS

And Track Material complete for Logging and Mining Roads and Industrial Enterprises on the

Instalment Plan.

Payment, cash margin 25 per cent., balance monthly for 24, 36 or 60 months. Also

Locomotives and Cars

On same terms. Second-hand Rails purchased.

The STEEL RAIL SUPPLY CO.

HUMPHREYS & SAYCE, Mgrs., 10 Wall St., New York.

We have no Agents.

SOUTHERN LUMBER DIRECTORY.

A List of Leading Lumber Dealers and Manufacturers in the South.

This list of representative Southern lumber merchants and manufacturers is published for the benefit of those who desire to reach responsible houses in this branch of business in the South. Readers of the MANUFACTURERS' RECORD who have occasion to correspond with any of the firms mentioned below will confer a favor by mentioning this paper.

Yellow Pine.

I. B. Gordon & Co., Alpine, Ala.
Villa Rica Lumber Co., Anniston, Ala.
J. R. Adams & Sons, Birmingham, Ala.
Hawkins & Smith, Birmingham, Ala.
C. T. Hughes & Co., Birmingham, Ala.
Riddle & Simpson, Birmingham, Ala.
Southern Supply Co., Birmingham, Ala.
Marbury & Jones, Bozeman, Ala.
D. W. & U. Blacker, Brewton, Ala.
W. W. Weaver, Castleberry, Ala.
J. A. Dudley, Clanton, Ala.
O. A. Duke, Clanton, Ala.
L. B. Wells, Clanton, Ala.
H. C. Higman & Co., Decatur, Ala.
Dunham Lumber Co., Dunham, Ala.
Thos. Taylor, Escatawpa, Ala.
Gadsden Lumber Co., Gadsden, Ala.
Tuscaloosa Lumber Co., Hull, Ala.
Downing & Scott, Kirkland, Ala.
Ray City Lumber Co., Mobile, Ala.
E. B. Vaughan, Mobile, Ala.
Alabama Lumber Syndicate, Montgomery, Ala.
S. B. Allen & Co., Montgomery, Ala.
W. A. Drives & Co., Montgomery, Ala.
Moore, Kirkland & Co., Montgomery, Ala.
S. A. Blasingame, Verbena, Ala.
Wagar Lumber Co., Wagar, Ala.
W. W. Wadsworth, Wadsworth, Ala.
Arkadelphia Lumber Co., Arkadelphia, Ark.
Empire Lumber Co., Ashton, Ark.
Long Bell Lumber Co., Buckner, Ark.
Cotton Belt Mill Co., Cotton Belt, Ark.
Eagle Lumber Co., Eagle Mills, Ark.
Red River Lumber Co., New Lewisville, Ark.
A. J. Neimeyer Lumber Co., Waldo, Ark.
Fordyce Lumber Co., Fordyce, Ark.
The Florida Phosphate Co., Ltd., Phosphoria, Fla.
J. S. Betts & Co., Ashburn, Ga.
Gress Lumber Co., Atlanta, Ga.
Wilson Coal & Lumber Co., Atlanta, Ga.
Donalson Lumber Co., Donalsonville, Ga.
Perkins Manufacturing Co., Augusta, Ga.
Stillwell, Millen & Co., Savannah, Ga.
E. B. Hunting & Co., Savannah, Ga.
Georgia Lumber Co., Savannah, Ga.
F. F. Putney, Hardaway, Ga.
Charles Bewick & Co., Hazelhurst, Ga.
Alderfer & Bull, Isabella, Ga.
Hogan & Winger, Kensington, Ga.
J. A. Williams, Sumner, Ga.
A. I. Duncan & Co., West Bowersville, Ga.
W. E. Mayne, Carpenter, Ky.
P. Hendrickson, Conant, Ky.
Perkins & Miller Lumber Co., Ltd., Westlake, La.
Lock-Moore & Co., Ltd., Westlake, La.
R. J. Aycock, Longstreet, La.
C. P. Brasher, Marthville, La.
Joseph Horst, Maugansville, Md.
Elliott, Crawford & Co., Myrtle, Miss.
P. B. Myers & Son, Myrtle, Miss.
Ocean Springs Lumber Co., Ocean Springs, Miss.
B. J. Cansey, West, Miss.
Cary E. Spence, Pass Christian, Miss.
Keystone Lumber & Imp. Co., Bogue Chitto, Miss.
J. S. Blackburn, Ellisville, Miss.
W. L. Rankin & Bq., Shannon, N. C.
A. E. Rogers, Mullins, S. C.
R. F. Moss, Booker, Va.
The A. F. Withrow Lum. Co., Millboro Depot, Va.
U. B. Simpson & Son, Naruna, Va.

North Carolina Pine.

Page Lumber Co., Aberdeen, N. C.
The Greenville Land & Imp. Co., Greenville, N. C.
Guilford Lumber Mfg. Co., Greensboro, N. C.
Goldsboro Lumber Co., Goldsboro, N. C.
G. Vyne & Son, Wilkesboro, N. C.
John Hickson & Co., Lynchburg, Va.

Cypress.

Morris & England, Kro, Ark.
Cypress Lumber Co., Sherrill, Ark.
T. O. Wilson Lumber Co., Tillar, Ark.
Nuchner & Brown, Peach Orchard, Ark.
Moline Lumber Co., Helena, Ark.
J. M. Milburn & Bro., Greenway, Ark.
J. C. McCain, Greenway, Ark.
W. R. Emerson, Emerson, Fla.
J. C. Burleigh, Midland, Fla.
F. S. Ramberg, Jasper, Fla.
S. J. Temple, Temple's Mills, Fla.
J. P. Little, Sumner, Fla.
Geo. H. Barker, Waldo, Fla.
A. A. Bunnell, Raulerson, Fla.
Windemere Land & Lumber Co., Windemere, Fla.
Kelly, Cosby & Co., Jug Tavern, Ga.
Dietrich & Dopson, Lenox, Ga.
W. T. McArthur, McArthur, Ga.
W. H. Moxley & Co., Macon, Ga.
W. R. Peterson & Co., Wadley, Ga.
Lawless & Kile, Franklin, La.
Louisiana Cypress Lumber Co., Harvey, La.

Callahan & Lewis Mfg. Co., Patterson, La.
McEwen & Murray, New Orleans, La.
Hanson & Smith, Wilmington, N. C.
J. C. Fulton, Aransas Pass, Texas.
Calcasieu Lumber Co., Austin, Texas.
M. T. Jones & Co., Childress, Texas.
J. H. Folkey, Korville, Texas.

Hardwoods.

North Alabama Lumber Mfg. Co., Bridgeport, Ala.
Bridgeport Lumber Co., Bridgeport, Ala.
Hill & Mitchell, Center Star, Ala.
W. A. Koeppe, Coaling, Ala.
Decatur Lumber Co., Decatur, Ala.
H. S. Freeman, Decatur, Ala.
Black Warrior Lumber Co., Demopolis, Ala.
Alabama Lumber & Mfg. Co., Gurley, Ala.
G. Vaughan, Hollywood, Ala.
C. G. Huffman, Hollywood, Ala.
Clifton & Hendrix, Jasper, Ala.
Elliott & Carter, Jasper, Ala.
W. M. Beatty, Austin, Ala.
J. W. Ray, Arkadelphia, Ark.
Desha Lumber Co., Arkansas City, Ark.
Batesville Lumber Co., Batesville, Ark.
Russell & Elder, Beebe, Ark.
South'n Hardwood Lumber Co., Black Rock, Ark.
E. M. Ford Land & Timber Co., Gilmore, Ark.
Kelley & Wells Lumber Co., Newport, Ark.
Cream City Lumber Co., Lamberthville, Ark.
J. M. Melfert, Lowell, Fla.
Ray & Geise, Bronwood, Ga.
Altamaha Cypress Lumber Co., Brunswick, Ga.
Montford & Mitchell, Butler, Ga.
Glasgow & Henderson, Cassville, Ga.
Green & Eshum, Clay Hill, Ga.
W. H. Allen, Cordele, Ga.
Greer Bros., Ada, Ga.
D. T. Harris, Dixon, Ga.
W. T. Opie, Dover, Ga.
A. J. McMullen, Hartwell, Ga.
Matthews & Anderson, Knoxville, Ga.
R. W. Ballard, Newton Factory, Ga.
O. W. Wadley, Rogers, Ga.
L. T. Browner, Adairville, Ky.
G. W. Hummer, Adairville, Ky.
W. Conn & Son, Bedford, Ky.
Snider Bros., Berea, Ky.
Gibson & Hale, Flat Lick, Ky.
J. L. Naylor, Wickliffe, Ky.
Samuel Anglen, Lafayette, Ky.
H. E. Miller, Lewisburg, Ky.
Fetter Cochran & Co., Louisville, Ky.
J. C. Williamson, Mouth of Pond, Ky.
The Cumberland Co., Middlesborough, Ky.
Waters & Bringham, Pineville, La.
J. H. McBride, Winnfield, La.
The Loomis & Hart Mfg. Co., Chattanooga, Tenn.
John Hoagland, Spring City, Tenn.
E. Cravens, Bagwell, Texas.
Jas. M. Williams, Charlottesville, Va.
Smith & Co., Reedy Ripple, W. Va.
Shelly & Wirgman, Romney, W. Va.

Shingles.

A. C. Danner, Mobile, Ala.
J. Bradley, Hartsell's, Ala.
Conecuh & Patsaliga Lumber Co., Luverne, Ala.
G. N. Buchanan, Luverne, Ala.
J. D. Cameron & Son, Mobile, Ala.
Mobile Shingle Co., Mobile, Ala.
Mountain & Sons, Mobile, Ala.
C. G. Richards & Son, Mobile, Ala.
Stewart & Butt, Mobile, Ala.
Gulf States Lumber Co., Montgomery, Ala.
D. Goulet & Co., Black Rock, Ark.
F. McKay, Black Rock, Ark.
Camden Shingle Mill Co., Camden, Ark.
Price Lumber Co., Paragould, Ark.
Carey & Ollinger, Bagdad, Fla.
A. L. Wellman & Co., Beresford, Fla.
Florida Shingle Mills, Brooksville, Fla.
W. Springstead & Son, Brooksville, Fla.
Mearns Shingle Mill, Davenport, Fla.
Wm. A. McCann, Jacksonville, Fla.
A. G. Russel, Oviedo, Fla.
Little & Chapman, Rosewood, Fla.
Atlanta Lumber Co., Atlanta, Ga.
P. G. Grant, Atlanta, Ga.
T. E. Collier, Cordele, Ga.
King & Burch, Hawkinsville, Ga.
Yarbrough & Perry, Fullington, Ga.
Ino. Akers & Co., Scotland, Ga.
Baily Bros., Toccoa, Ga.
Mayfield Shingle Co., Wishart, Ga.
Worth Lumber Co., Worth, Ga.
G. W. Clere, Coalton, Ky.
Monroe Smith, McKinney, Ky.
The J. H. Poe Shingle Co., Lake Charles, La.
Harris & Thornton, Chattanooga, Tenn.
L. Miller Shingle Co., Orange, Texas.
Kizer Lumber Co., Texarkana, Texas.
Fritz Sitterding, Richmond, Va.
Gurley & Rogers, Norfolk, Va.
Nottingham & Wrenn, Norfolk, Va.
Ino. L. Roper Lumber Co., Norfolk, Va.

Staves and Heading.

F. W. Sharp & Co., Larkinsville, Ala.
J. R. Adams & Son, Longview, Ala.
Montgomery Stave & Bldg. Co., Montgomery, Ala.
J. C. Sheets & Co., Montgomery, Ala.
P. V. Deland, Black Rock, Ark.
Hammett & Bailey Stave Co., Greenway, Ark.
Arkansas Stave Works, Greenway, Ark.
J. F. Hasty & Son, Paragould, Ark.
G. M. Rosegrant, Paragould, Ark.
Wilson Bros., Piggott, Ark.

Backus Bros., Pine Bluff, Ark.
Little Rock Cooperage Co., Little Rock, Ark.
Tampa Lumber Co., Tampa, Fla.
Hagan & Platt, Pine Level, Fla.
R. H. Brewer, Cedartown, Ga.
Georgia & Tennessee Lumber Co., Laconite, Ga.
F. H. Waring & Co., Cement, Ga.
Allen & Briggs, Bardwell, Ky.
F. B. Freeman, Cumberland Falls, Ky.
Johnson & Overshiner, Hopkinsville, Ky.
T. H. Meehan, Louisville, Ky.
J. G. Evans & Co., Moorehead, Ky.
Tippett & Co., Moorehead, Ky.
Edward Farley, Paducah, Ky.
Lester & Little, Sloans Valley, Ky.
Pinnell & Webb, Somerset, Ky.
George D. Eike, New Orleans, La.
E. O. Felton, Ronceverte, W. Va.
J. Beckwith & Co., Waverly, W. Va.

Railroad Ties.

W. J. Felt, Greenup, Ky.
G. & A. Kopp, Louisville, Ky.
Southern Tie & Lumber Co., Louisville, Ky.
James S. Pope, Halls, Md.
P. L. Conquest & Co., Norfolk, Va.

Spokes and Handles.

Jacob Wise & Son, Fulton, Ky.
Paducah Handle Works, Paducah, Ky.
Hendersonville Mfg. Co., Hendersonville, N. C.
Rutherfordton Sp. & Hdl. F'y, Rutherfordton, N. C.
C. J. Dundas, Statesville, N. C.
Thomasville Spoke Works, Thomasville, N. C.
Johnson Bros., Brownsville, Tenn.

Southern Real Estate Directory.

For the convenience of the many readers of the MANUFACTURERS' RECORD it has been deemed advisable to collect under this head a reliable list of Realty Agencies of the Southern States. The value of such a list for the purpose of Ready Reference will immediately become apparent to all who are interested in the growth of this section.

DISTRICT OF COLUMBIA.

WASHINGTON, D. C.—Chas. A. McEuen, Real Estate, Loans and Insurance. 1420 F. St.

FLORIDA.

OCALA—J. V. Burke, Phosphate, Pine and Cypress Timber Lands. Loans negotiated.

GEORGIA.

MACON—American Investment & Loan Co. owns valuable Real Estate in and around Macon. Real estate secured for investors.

SAVANNAH—Jackson & Whitley, Counselors at Law. Real Estate and Collection Department. W. G. Woodfin, manager.

NORTH CAROLINA.

ROCKY MOUNT—Geo. S. Sartin, Town Lots, Acre Property, Farms.

NORTH WILKESBORO—W. F. Trogdon, Town Lots and Farm Lands.

OLD FORT—O. H. Blocker, Real Estate, Timber and Mineral Lands.

RALEIGH—J. M. Broughton & Co., Real Estate, city and country realty.

ROCKY MOUNT—Arrington & Arrington, Real Estate. Correspondence invited.

WINSTON—E. R. Amls, Real Estate. First-class investments a specialty.

TENNESSEE.

MEMPHIS—Hodge & Bro., 59 Madison St., Real Estate Agents and Dealers.

VIRGINIA.

CHARLOTTESVILLE—J. C. McKennie & Co., Real Estate and Insurance Brokers.

NEWPORT NEWS—Cottrell Company, Real Estate. Correspondence invited.

NORFOLK—A. W. Cornick & Co., Real Estate Agents, 102 Main Street.

SAILOR COTTON ELEVATOR.

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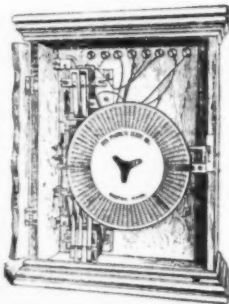
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Send for printed matter.

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Little Rock, Ark.



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An Electric Watchman's Clock Without Batteries.

1. It keeps an exact record of the times when the watchman visits each station.
2. IT DISPENSES ENTIRELY WITH A BATTERY.
3. It is simple in construction, and not liable to get out of order.
4. IT CANNOT BE TAMPERED WITH NOR FALSE RECORDS BE MADE ON IT.
5. It can be sent to any part of the country, and set up by any one of ordinary intelligence.

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Pine Box Shooks

IN CARLOAD LOTS.

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Ice Cream Freezer Machinery and box the machinery.
ALVIN STREETER,
Winchendon, Mass.

Automatic Sprinklers



Will PROTECT your factory from fire.

Write to us for estimates.

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Sprinkler Co.

Columbus, Ga. Warren, O.

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Illustrated pamphlet and sample free.

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Niles, Ohio, and Wheeling, W. Va.



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Electrical Engineers and Contractors,

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Correspondence Solicited.

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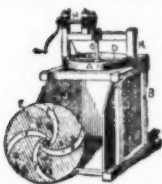
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superior mechanical
construction.

Two boys can easily cut
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one hour, and if steam
power is used it will cut
all that one man can feed.
Cutters for pumpkins,
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ing Baking Powder, Self-Rising and Buckwheat
Flour, &c.

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Eastern Branch, 35 Murray St., New York, N. Y.

K. B. GRAHN, Proprietor.

A. CROSSLEY, Superintendent.

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MANUFACTURERS OF FIRE BRICKS of a superior quality.

Grate Tiles, Stove Linings, Ground Fire Clay, Coke Oven Bricks. Cupola
Linings, Blast Furnace Linings and Glass Furnace Blocks a Specialty.

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Proprietors of the Celebrated Mount Savage Fire Brick. GOVERNMENT STANDARD.
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The First Manufacturer of its kind in the United States.

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Branch Offices: No. 1 Broadway, New York, N. Y.; No. 222 S. Third St., Philadelphia, Pa.; Lewis
Block, Pittsburg, Pa.

HENRY STEVENS' SONS, Macon, Ga.

Manufacturers of

Sewer and R. R. Culvert Pipe,

Fire Brick, Milled Clay Flue Pipe and Chimney Tops,
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Manufacturers of All Grades, Shapes and Sizes of

FIRE BRICK.

Make a Specialty of Furnace, Rolling Mill and Coke Oven Brick.

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CROWN BRONZE AND BRASS FOUNDRY.

Heavy Castings, Propeller Wheels and Marine Work SPECIALTY.
MANUFACTURERS OF PHOSPHOR BRONZE.

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Mount Horeb, East Tennessee, make Telegraph
Lines in complete working order a specialty.
Wiring by Contract at Low Figures.

WORK GUARANTEED FIRST-CLASS.
Correspondence Solicited.

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Fifth Avenue
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The Highest
Class. ABSOLUTELY
FIRE-PROOF.
American
and Europe-
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The water and ice used are vaporized and
frozen on the premises, and certified to as
to purity by Prof. Chas. F. Chandler.

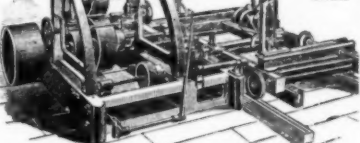
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Strong.
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Highest
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WE guarantee these Mills to be better made, to do faster and finer work, to have more
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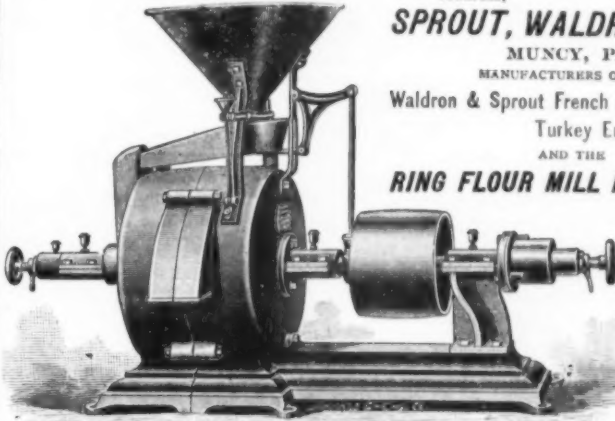
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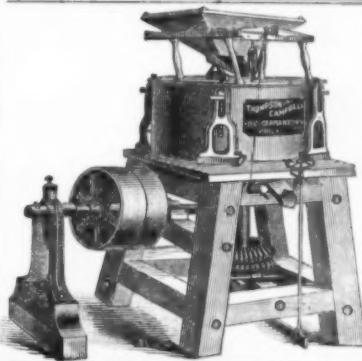
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RUNNER **PORTABLE MILL.**

For Grinding Wheat, Corn, Oats and
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With our Patent Stands, Balance Ryne and
Gearing put on in our improved style.
These Mills are furnished with Shoe or Silent
Feeder, as preferred. The Stones are of the
very best selected French Burr Old Stock Blocks
or solid New Stock, whichever may be best for
the material to be ground. The Mill is built
in the most substantial manner.

— IMPROVED —

Plumbers' Blast Furnace.

WILL MELT TEN POUNDS OF SOLDER
IN SIX MINUTES.

SAFE, QUICK and CONVENIENT. BEST and CHEAPEST.

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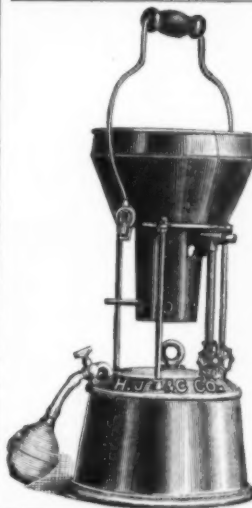
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PERFECT SATISFACTION, and our track
has no equal, and our prices
are right.

CRONK'S

Double-Braced Steel Rail

Patented June 12, 1888.

With covered wheels, making it stronger, and also keeps off all storm and everything that might
block the wheels, and cannot be broken or thrown from the track. Each hanger has gauge mark to
put it up by, so anyone can hang door and get it right first time.

CRONK HANGER CO., - - ELMIRA, N. Y.



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Mounted on both Iron and Rubber Wheels. Trucks made to order.
HEAVY MILL CASTORS, Iron or Rubber Wheels.

Write for prices.

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No! Then you should not have an artistic Jack-of-all-trades make cuts of them. Have them made by one who understands machinery.

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Send for Catalogue.

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SELMAR HESS.

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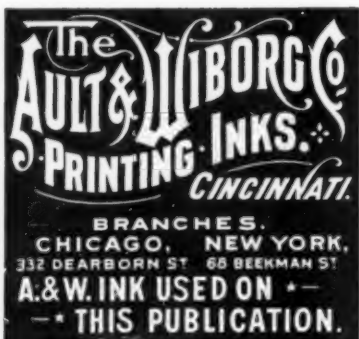
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ANNUAL REPORT.

OFFICE OF THE WESTERN MARYLAND RAILROAD CO.
BALTIMORE, November 23, 1892.

To the Mayor and City Council of Baltimore and the Stockholders of the Western Maryland Railroad Company:

Gentlemen—The following statement of the operations of the road for the year ended September 30, 1892, is respectfully submitted:

The gross earnings upon the Main Line, the Baltimore and Cumberland Valley Railroad and the Baltimore and Harrisburg Railway, were:

From Passengers.....	\$ 403,713 42
From Freight and Express.....	593,412 25
From Milk and Marketing.....	25,899 94
From Mails.....	32,544 82
From Miscellaneous Sources.....	17,751 08

Total.....\$1,083,321 54

The Operating Expenses—Including Rent of Hillen Station and Cost of Operating the Baltimore and Cumberland Valley Railroad and the Baltimore and Harrisburg Railway, were.....691,028 36

The Net Earnings were.....\$392,293 18

The Expenditures in Betterments were.....86,236 22

The distribution of Expenses was as follows:

OPERATING.

Expenses of Transportation Department.....	\$ 415,059 46
Expenses of Machinery Department.....	95,459 75
Expenses of Road Department.....	134,712 99
General Expenses.....	45,766 16

Total.....\$691,028 36

BETTERMENTS.

Expenses of Machinery Department (New Equipment, &c.).....\$ 33,694 37

Expenses of Road Department.....52,541 85

Total.....\$86,236 22

The Earnings, as compared with 1891, were as follows:

Increase from Passengers.....\$ 24,823 73

Increase from Freight and Express.....157,607 21

Increase from Milk and Marketing.....1,252 83

Decrease from Mails.....1,565 47

Decrease from Miscellaneous Sources.....3,174 79

Total Increase of Earnings.....\$178,943 53

The Expenses, as compared with 1891, were as follows:

Increase in Expenses of Transportation Department.....\$ 79,359 76

Increase in Expenses of Machinery Department.....15,565 28

Increase in Expenses of Road Department.....15,731 54

Increase in General Expenses (Legal, Taxes and Insurance).....9,203 80

Total Increase.....\$119,890 38

Increase in Net Earnings over 1891.....\$ 59,053 15

BETTERMENTS.

Decrease in Expenses of Transportation Department.....\$ 567 74

Decrease in Expenses of Road Department.....6,240 70

Increase in Expenses of Machinery Department.....11,280 99

Total Increase.....\$ 4,466 55

Of the \$86,236 22 charged to betterments, \$33,221 28 was for new equipment, \$15,479 99 for new buildings, \$8,226 96 for improved bridges, \$15,420 for steel rails for branch lines, \$11,459 43 for new side tracks and stone ballast, \$1,389 86 for new water stations, and \$1,109 70 for stationary machinery, etc.

Stated separately, the gross earnings of the Baltimore and Harrisburg Railway were \$201,281 27, the expenses \$114,665 95 and the net earnings \$86,615 32. Net increase over 1891, \$21,662 20.

There were moved during the year 1,298,063 passengers and 998,938 tons of freight, the train performance being equivalent to the movement of 24,739 592 passengers and 40,544,033 tons of freight a distance of one mile, which, compared with 1891, shows an increase of 1,078 992 passengers and 20,605,106 tons of freight carried one mile.

The average rates of transportation received during the year were one and sixty-three hundredths (1.63) cents per passenger per mile, and one and thirty-nine hundredths (1.39) cents per ton per mile, which, compared with the rates of 1891, show an increase in the passenger rate of three hundredths (0.03) of a cent per passenger per mile, and a decrease in the freight rate of sixty-nine hundredths (0.069) of a cent per ton per mile.

The passengers were classified as follows: Full fare, 361,271; half and two-thirds fare, 24,518; commutation and mileage, 314,881, and excursionists, 597,353; total 1,298,063. Increase over 1891, 89,181.

The mileage performed by locomotives during the year was 1,393,358 miles, or 263,472 miles more than in 1891. The consumption of coal was 39,876 tons, or 65.5 pounds per mile run on the Main Line and 59.3 pounds per mile run on the B. & H. Division.

The amount paid for use of tracks of other roads in this city during the year was \$115,830.12. This amount does not appear in either the earnings or expenses of this company, but, as heretofore, was credited to the owning companies direct as their share of joint business.

This more than makes good the opinion expressed in the last annual report that \$100,000 trackage would be exceeded this year. Doubtless an additional \$5,000, or say a total of \$121,000, would have been paid but for the practical suspension of the freight business to and from the city during the Grand Army Encampment in September.

With this experience, it would seem safe to predict a payment of \$150,000 during the next fiscal year, but even on a basis of \$125,000, \$50,000 a year would be saved by the use of independent facilities, assuming that they would cost \$1,500,000, or \$75,000 per year interest.

Just as sure as the amount of trackage paid has about quadrupled in the past seventeen years will it again double within the next few years, when, under present arrangements, the company would be paying say \$230,000 trackage, or interest on over \$3,000,000 more than the cost of independent facilities.

While most roads have suffered a reduction of net earnings during the year, either from decreased business, lower rates or increased expenses, it must prove gratifying that this company is able to show an increase of \$178,943 53 in gross earnings, and \$59,053 15 in net earnings. A larger proportion of the gross earnings would have been net but for the fact that they were largely derived from low rate through business, handled in such volume as to increase the tonnage about 71 per cent, and the ton mileage about 103 per cent., with the attendant cost including that of foreign car service, while the operating expenses also include unusually large outlays in rebuilding locomotives and renewing 39 bridges upon branch roads.

When it is understood that the Potomac Valley Railroad was not opened for freight business until August 1, and for passenger business until September 12, while the fiscal year ended September 30, it will be seen that the operations of that line had very little influence upon the earnings for the year, hence there must be a marked improvement during the next year, when the earnings from this source will appear for the entire period.

Work upon the Baltimore and Harrisburg Railway (Eastern Extension), the new line between Porter's Junction and the city of York, is making rapid progress, so much so that its operations can hardly fail to figure in the next annual statement.

Up to this time York has been one of the few large manufacturing towns without railroad competition, but with the completion of this branch of the Western Maryland it will not only be given direct communication with all Western Maryland points, but through this road with the Norfolk and Western, Baltimore and Ohio and Philadelphia and Reading connections, thus changing York's present condition of restricted to one of most ample facilities, and thereby give a new impetus to its industries, which now enable it to pay annually for transportation an amount nearly equal to the gross earnings of this company. This line, with its further extension from York to the Susquehanna to connect there with the Reading system, and its proposed connection between Thomasville (which is an intermediate point between York and Porter's) and Bowmansdale (a point upon the Reading's Philadelphia, Harrisburg and Pittsburg line, eight miles west of Harrisburg), must prove equally important as the Potomac Valley Railroad proper, by which they are owned.

They, too, are middle links between large systems, or between such systems and important points, and not extremities, as are most new lines. For instance, the Potomac Valley has the Baltimore and Ohio's 5,000 miles of lines and connections at its Cherry Run end, the Western Maryland and Philadelphia and Reading, with the latter's 9,000 miles of lines and connections at the eastern end, and in view of the fact that it affords the Reading Road communication with the West by the Baltimore and Ohio's three lines, via Pittsburg, via Wheeling and via Parkersburg, it practically accomplishes more for half a million dollars than the South Penn project, which was only a Pittsburg line, would have done for \$25,000,000.

The proposed Harrisburg Extension, Porter's to Bowmansdale, will have Harrisburg and the Reading system, now including the Jersey Central, Lehigh Valley, and Delaware, Lackawanna and Western, in addition to the Poughkeepsie Bridge and connecting New England lines (including the Boston and Maine system), together with the anthracite coal fields at the one end, with the Western Maryland and the city and port of Baltimore at the other end, while the line from Thomasville through York to the Susquehanna will have the Western Maryland and Baltimore City, Hagerstown, the Norfolk and Western and the Baltimore and Ohio and connections at one end, with York and Lancaster, Cornwall, Lebanon, Reading, Allentown, Bethlehem and other Reading Railroad Points, (which compose the great iron manufacturing region of Pennsylvania) at the other end.

Bonds of the Potomac Valley Road are being sold from this office as necessary to defray the cost of construction of the above lines.

The increase in net earnings for the past two years has been \$174,423 26, which capitalized at 5 per cent, would give \$2,285,445 20 as the increase in value of the property during that time, and this practically without any contribution of revenue by the Potomac Valley Railroad; or, in other words, during the short time in which the city has been importuned to sell the road at an almost nominal price, its value, based upon the actual increase of net earnings, has advanced over two and a-quarter millions; that is, over a million dollars a year.

By order of the Directors.

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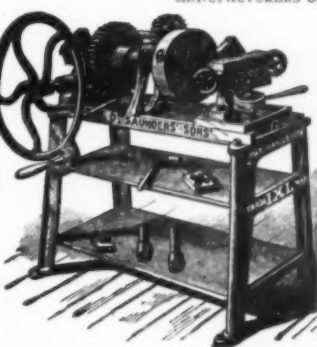
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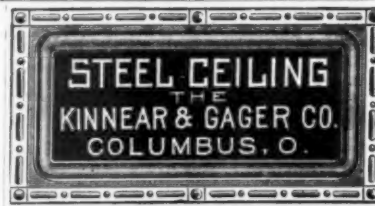
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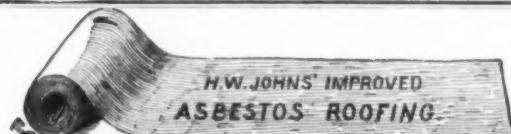
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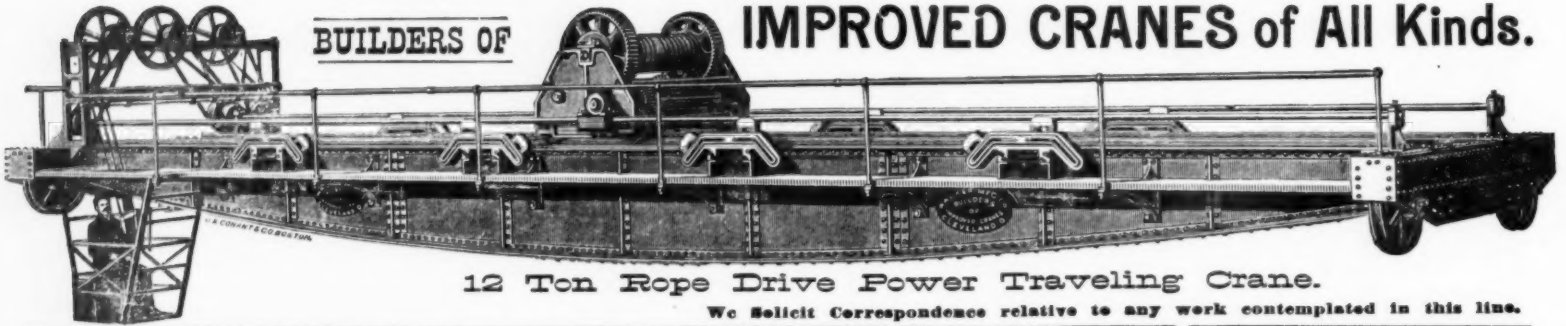
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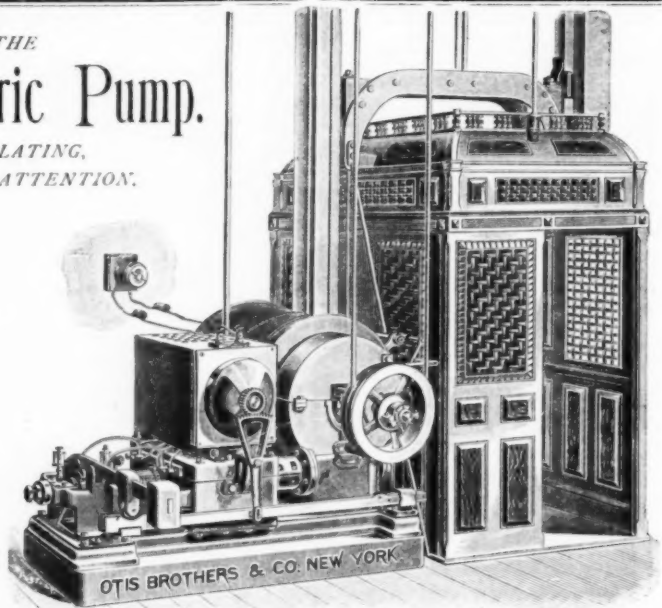
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Attached to any Electric Line.

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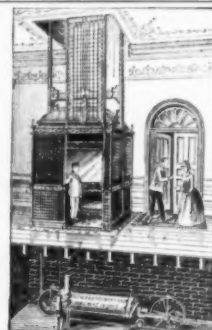
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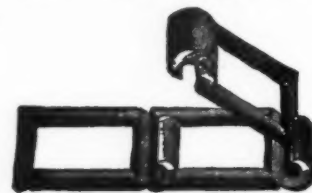
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Will Not Slip on
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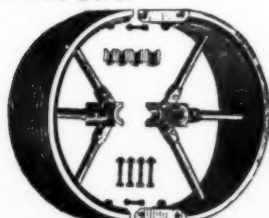
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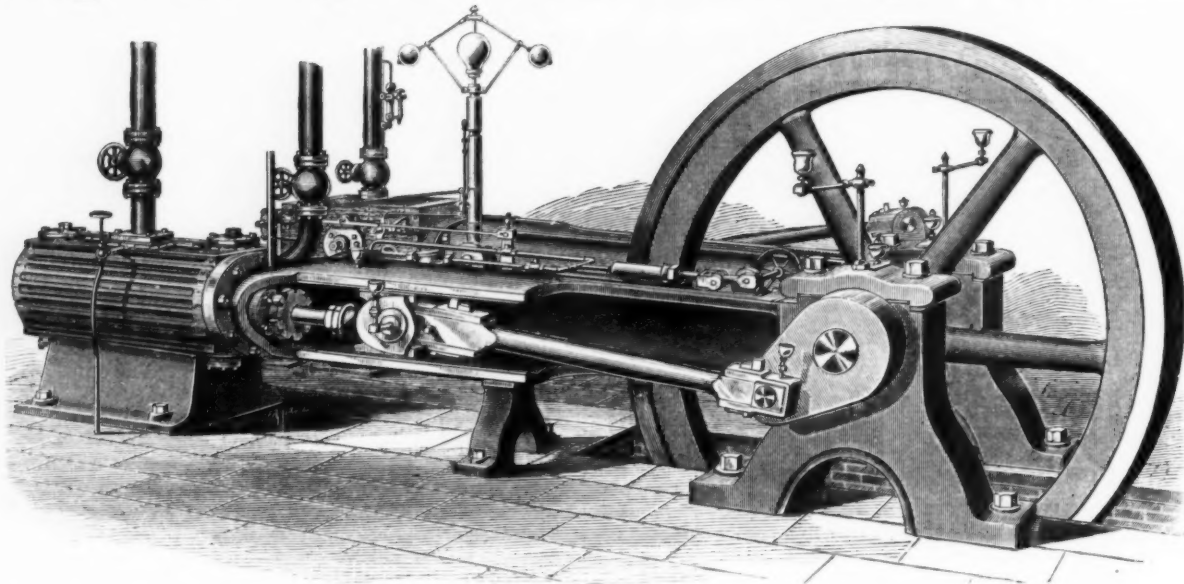


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SMALL AUTOMATIC MACHINES,

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STANDARD MACHINES,

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VESSEL AND STEAMSHIP PLANTS.

Any Capacity.

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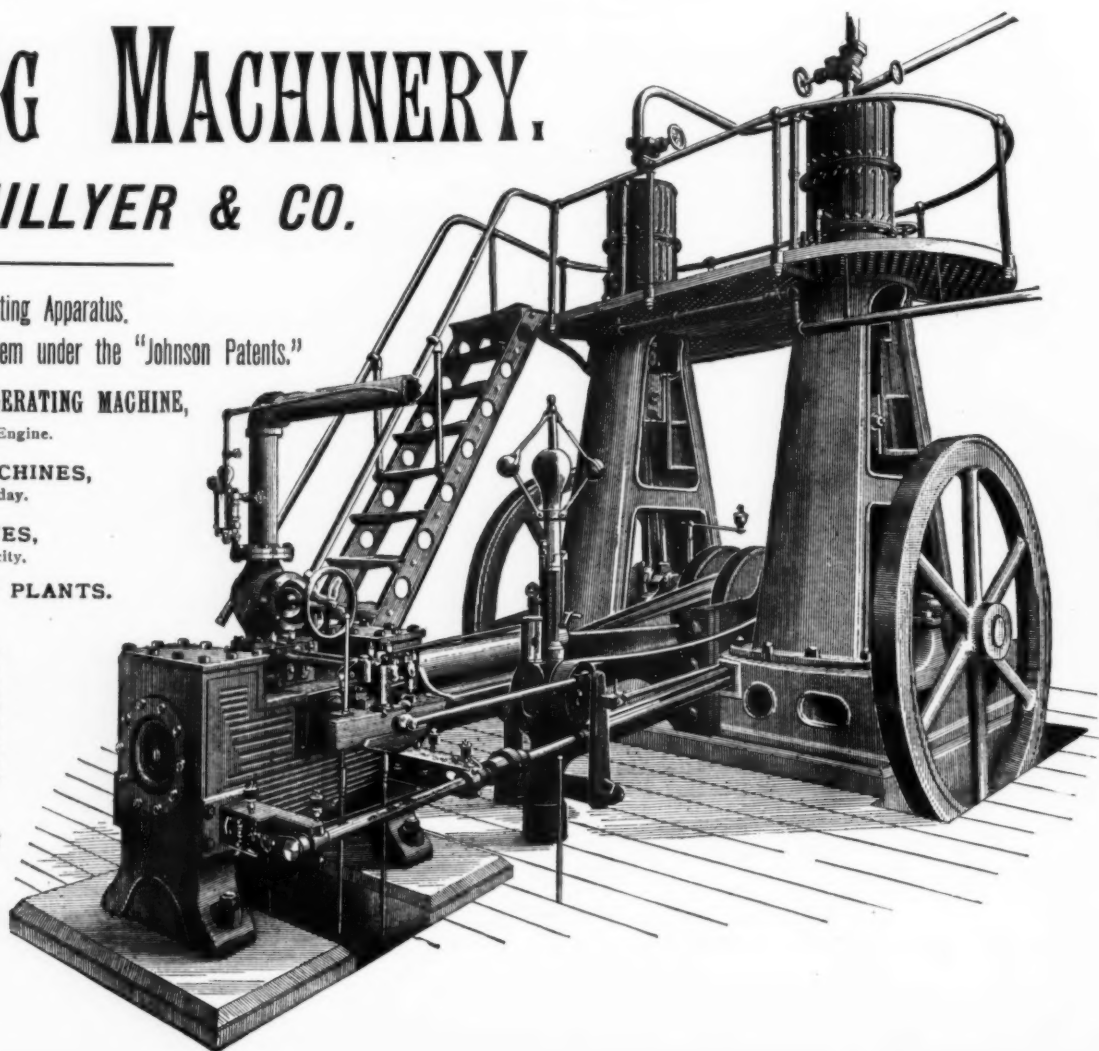
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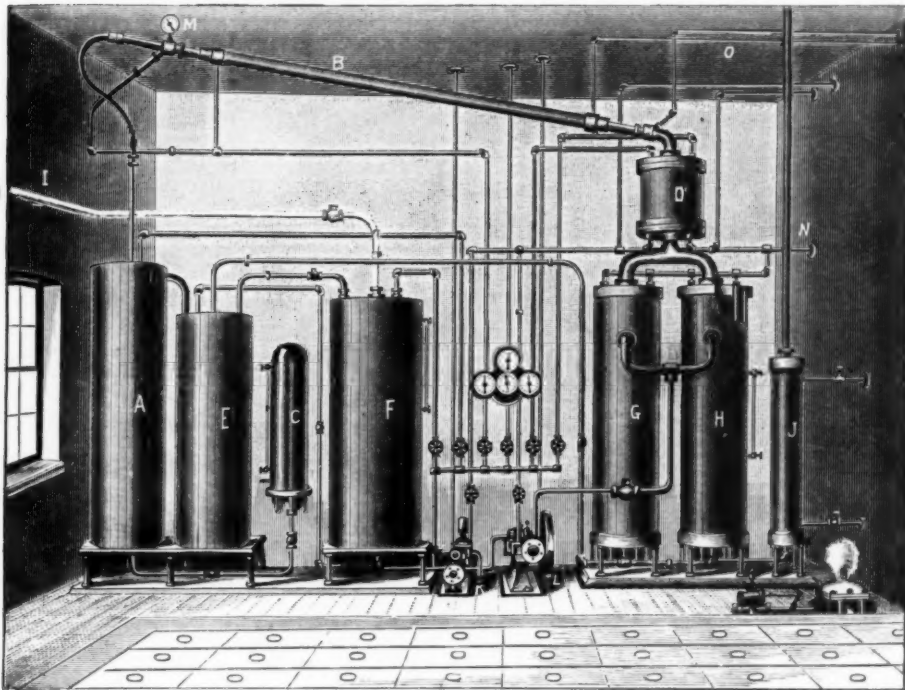


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For Ice Making, Cold Storage, Packing Houses, Creameries, Breweries, Hotels, Etc.



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Reliable, Economical, Easily Handled and Well Constructed.

Every Machine Guaranteed.

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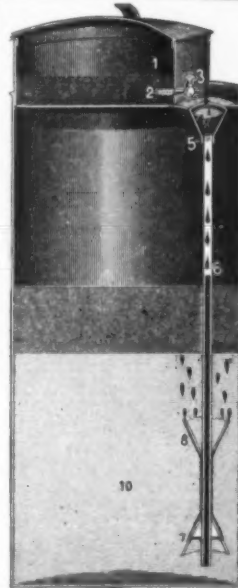
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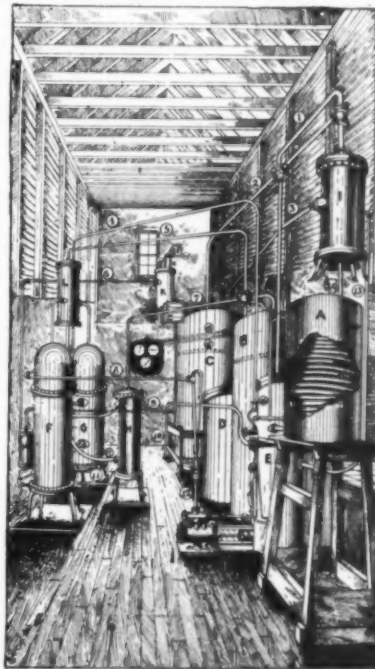
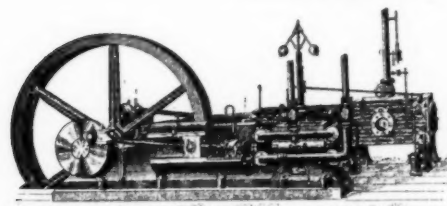
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13 TO 150 TONS CAPACITY.

SIMPLE, STRONG, EFFECTUAL AND ECONOMICAL.



IT LASTS LONGER AND USES LESS FUEL THAN OTHERS.

Keeling's Automatic

Ice Machine,

BUILT BY

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The Best Machine
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Not having been subjected to the injurious chemical action of
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BABBITT METALS,
BRASS AND PHOSPHOR BRONZE CASTINGS
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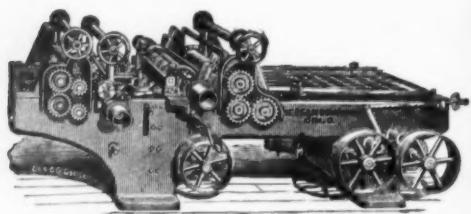
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Matches 14 inches wide; planes 24 inches wide, both sides.
Drop Matcher Attachment.

No. 3 SAME STYLE--SINGLE CYLINDER.

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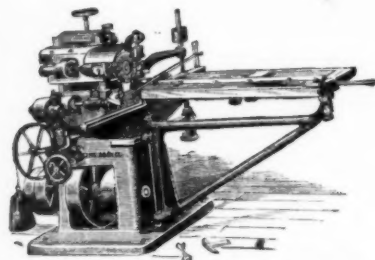
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We Meet the Wants
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Car Works, etc.

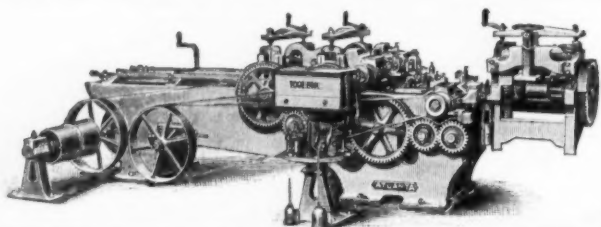


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The many points of advantage which we have introduced on our tenon machines gives them a preference for accurate and steady work. They are the most advanced machines of this type, and have the best essentials for rapid production and convenience of operation.

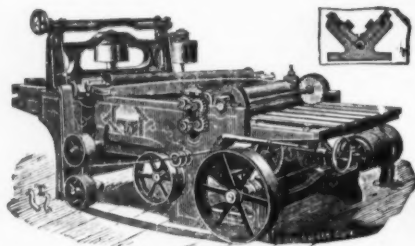
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Diagonal Planer and Polisher.



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Successors to ROWLEY & HERMANCO.

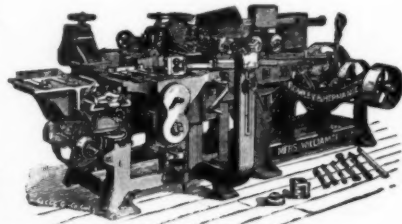
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Manufacturers of the Finest and Most Complete Line of

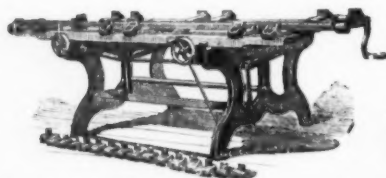
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IN AMERICA.

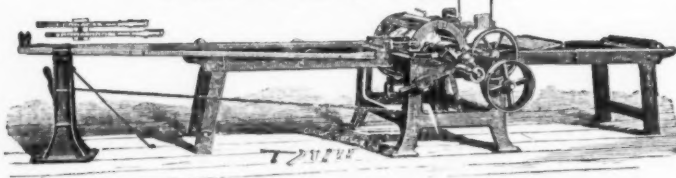
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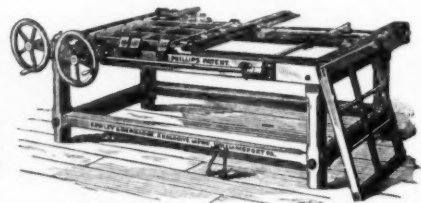
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Patent Door and Blind Clamp, with or without Sash Attachment.



No. 2 New King Power Feed Gang Rip Saw.



Phillips Patent Sash Clamp.

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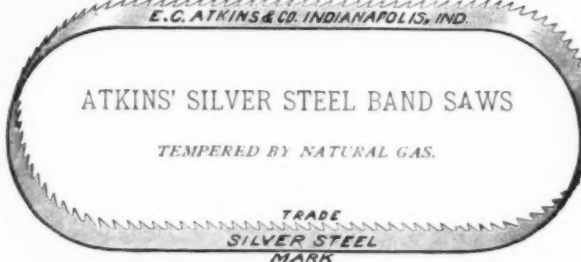
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Workmen at
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ALSO A FULL LINE OF MILL SUPPLIES.

Write for Sawyer's Hand-Book, Saws and Saw Tools, and our Prices.

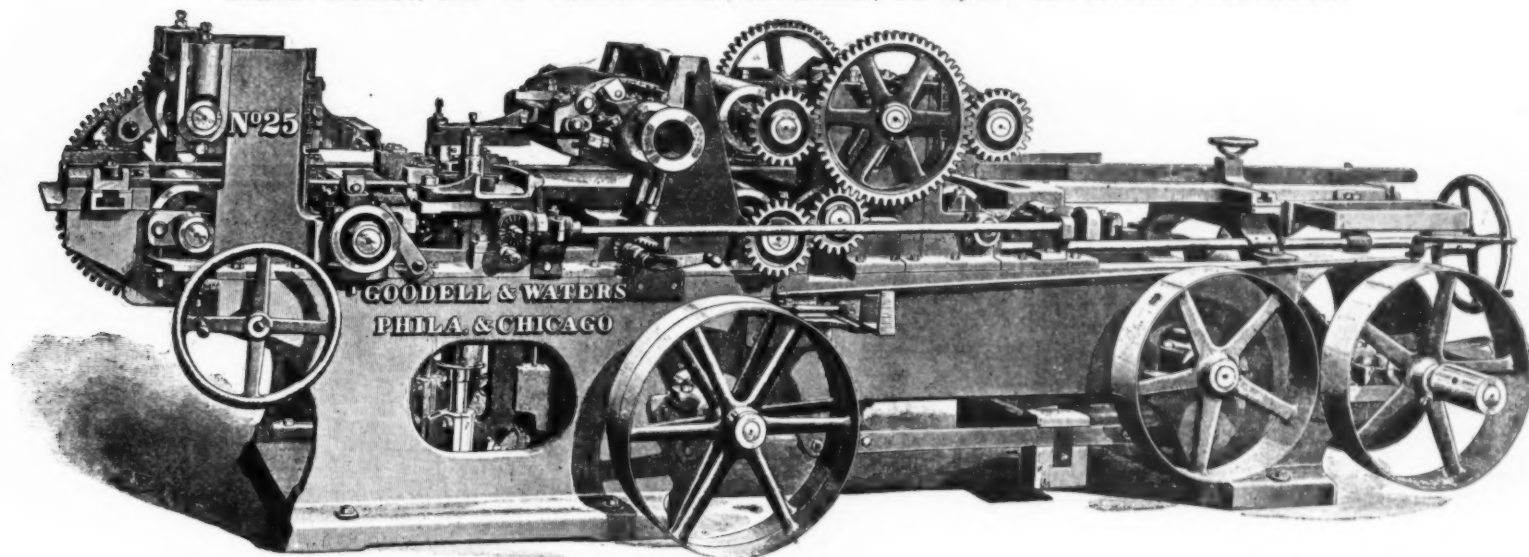
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BUILDERS OF

Wood Working Machinery,

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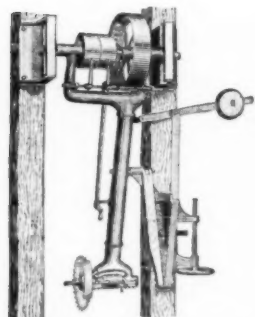
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No. 24 working 9 inches wide by 6 inches thick. Weight, 10,000 pounds.

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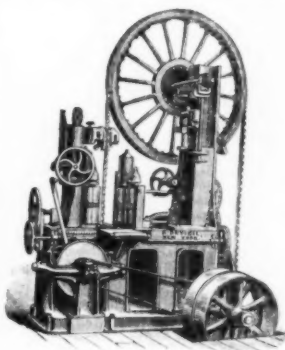


Patent Parallel Swing Saw, cuts in a perfectly straight line, thus rendering a comparatively small saw suitable for wide and thick lumber.

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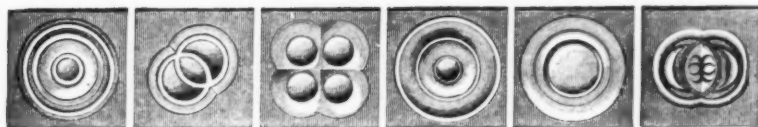
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Will work soft or hard wood and cut so smoothly that no sandpapering is required.

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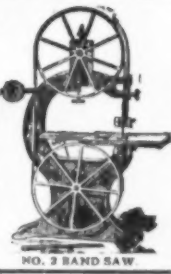
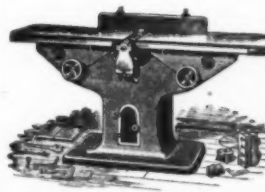
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Successors to TREVOR & CO.

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HEADING TURNERS

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HANDLE MACHINERY.

Lathes for turning Handles

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Staves, Heading, Shingles or

Veneer Cutting, send for our

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Handle Machinery, send

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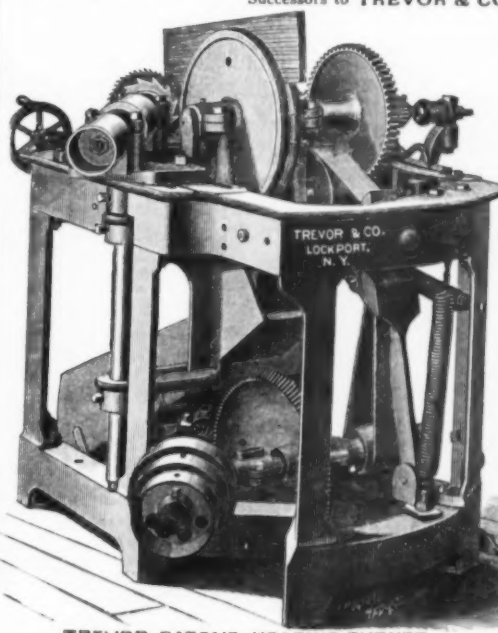
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WAY DOWN IN PRICES—WAY UP IN QUALITY.

SAW MILLS With the Best Changeable Feed in the World. Kentucky Self-feed Shingle and Lath Machines, Swing Saws,

DO NOT BUY BEFORE YOU WRITE TO

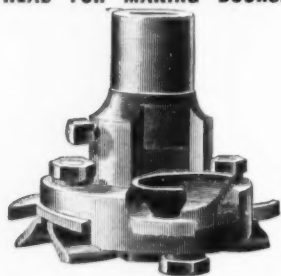
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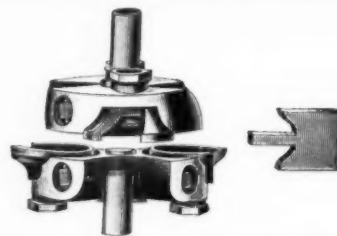
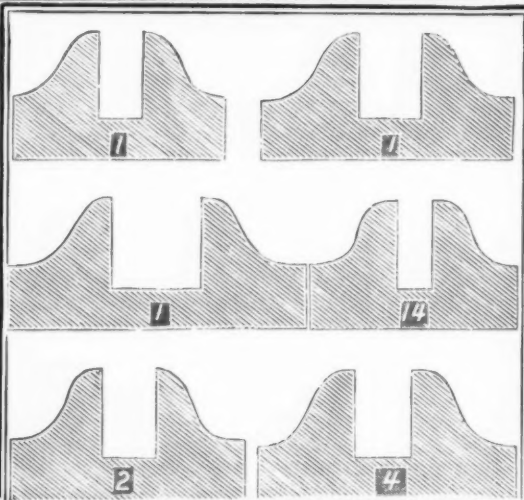
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THE BEST, AND GUARANTEED THE CHEAPEST
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BECAUSE

The bits produce a positive and uniform cut.
The bits operate with side clearances to their leading points.
Each bit contains in its circumference from five to seven inches of tool-cutting edge, or three times as great as the ordinary straight bits.
The inexperienced workman can readily operate them.



OUR COPE HEADS match the same pattern continually with perfect accuracy. A Great Success.

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TOOLS SOLD, and that Entirely upon their Merits.

We will make up a set of these tools and send to any reliable party on trial.

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WOOD-WORKING MACHINERY,
 FOR
SAW & PLANING MILLS.

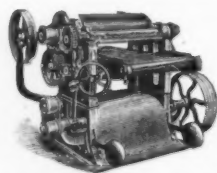

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WE MAKE A SPECIALTY OF
SELF-FEED SAWS - GANG RIP SAWS
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SEND FOR CIRCULARS.
WE SOLICIT CORRESPONDENCE


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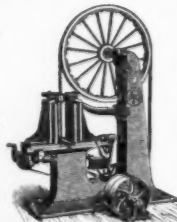
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Planers, Band Saws and Resaws, Moulders,
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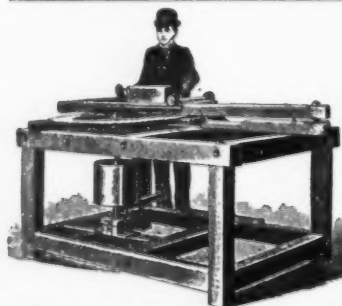
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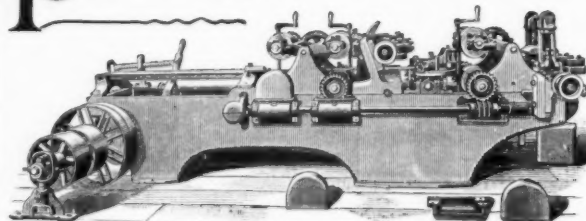
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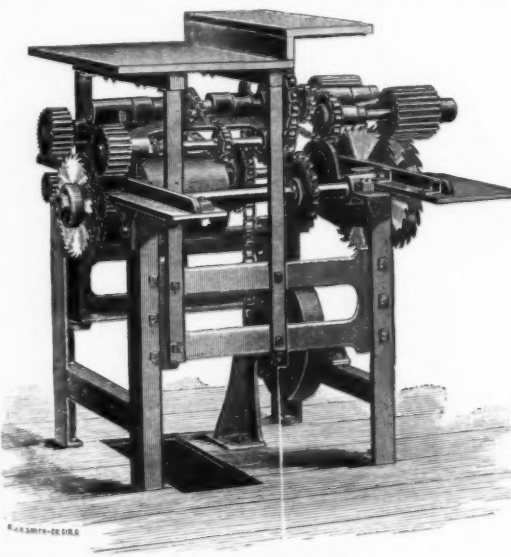
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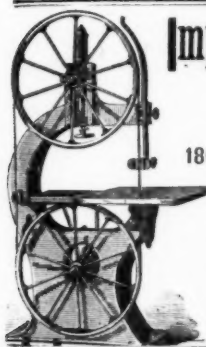


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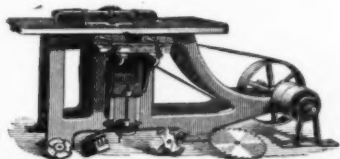
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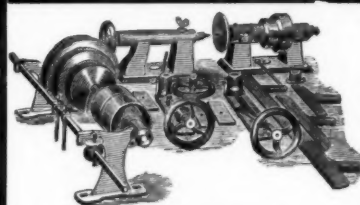
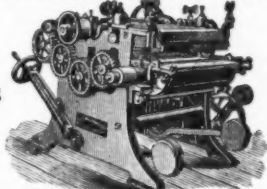
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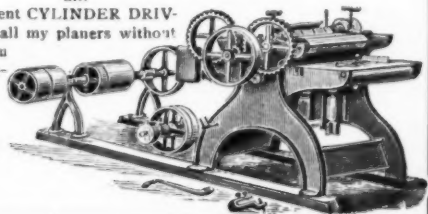


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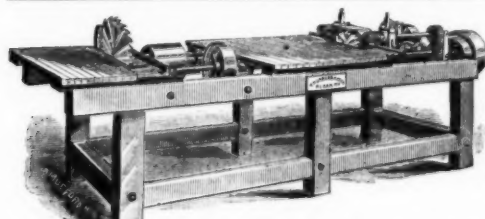
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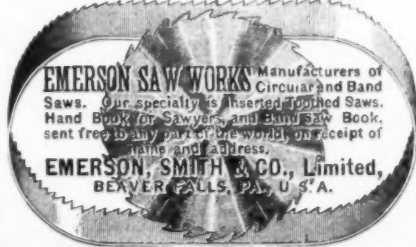
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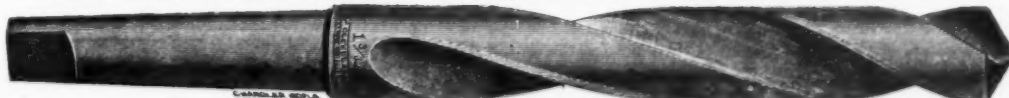
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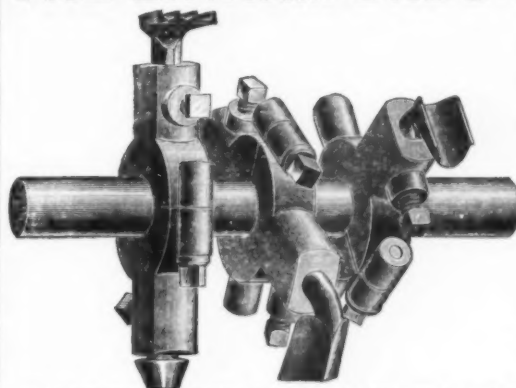
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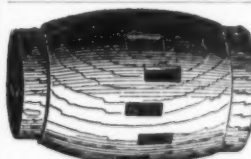
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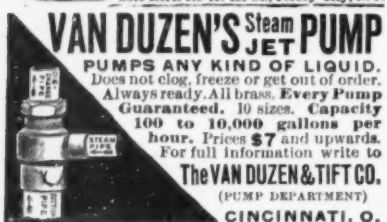
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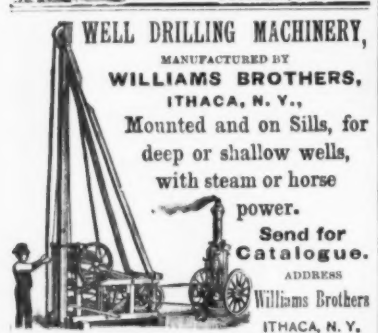
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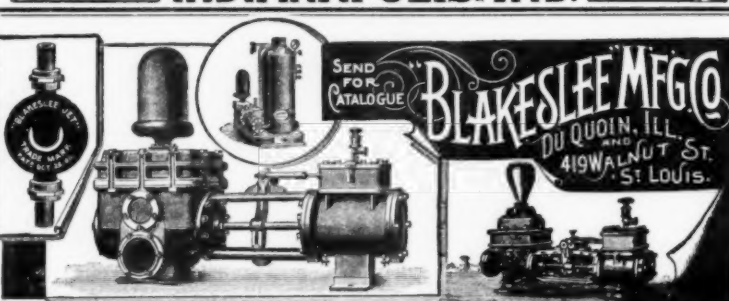


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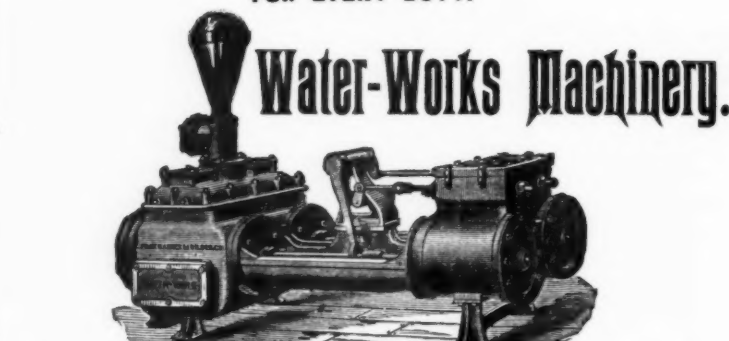


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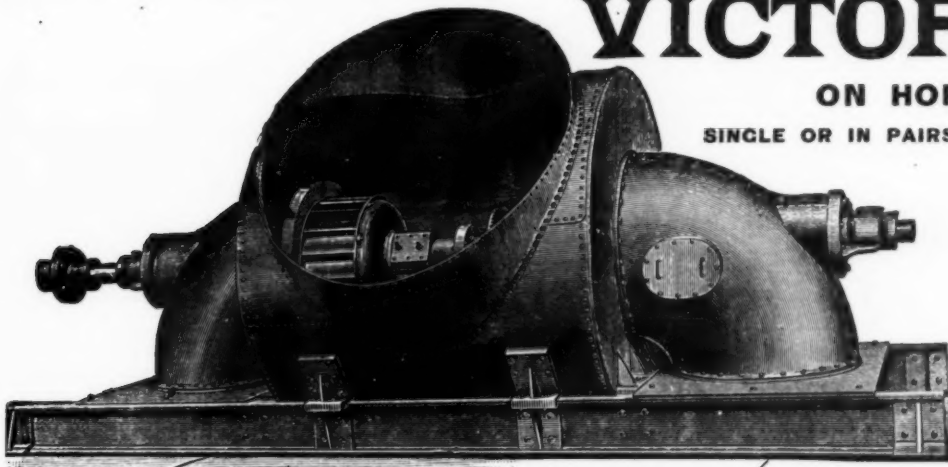
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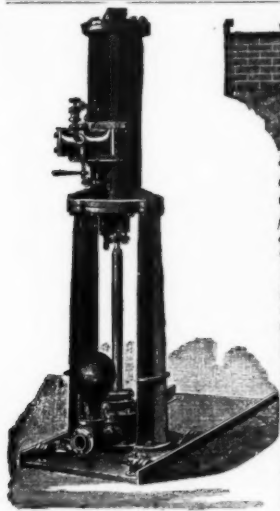
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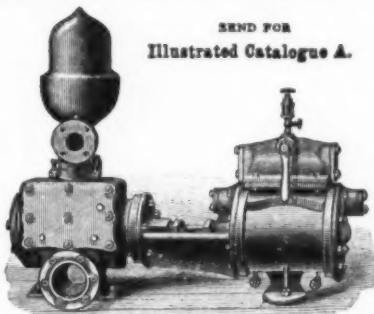
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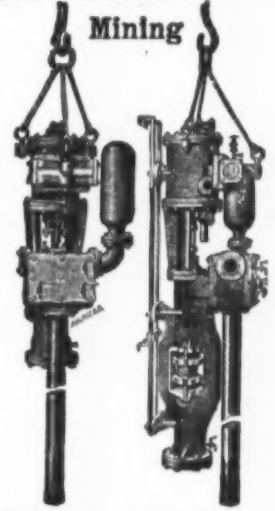
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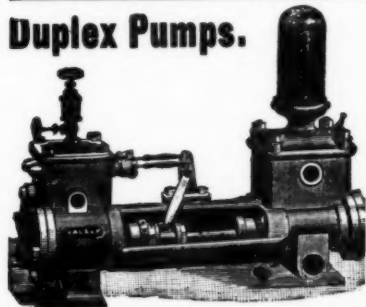
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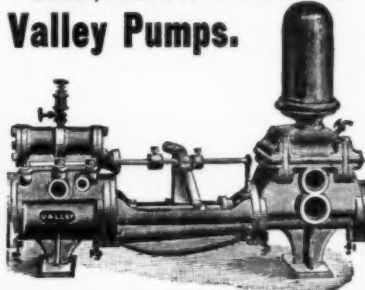
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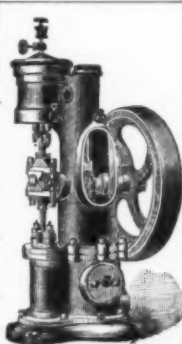
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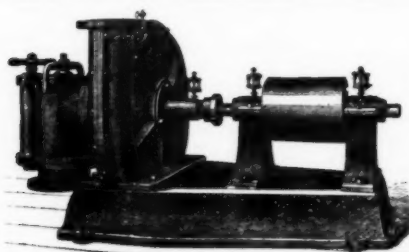
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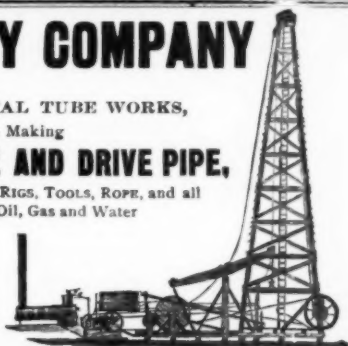
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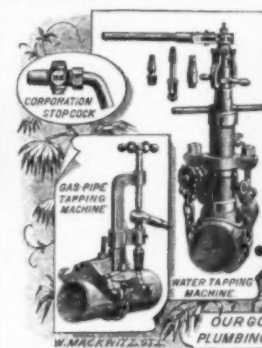
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NORTH WILKESBORO,

NORTH CAROLINA,

One of the Conspicuous Successes of the Year in Town Building,
Presents the Following Record:

Population March 4, 1891, actual count, 48.

Population March 4, 1892, actual count, 348.

Gain in one year 625 per cent.

Townsite purchased November 11, 1890; act of incorporation passed by the Legislature, March 4, 1891; first lot sold at private sale, May 12, 1891. Within the first year of its existence ten miles of streets have been graded, and \$22,000 spent in public improvements. Where prior to March 4, 1891, there was only a farm settlement without pretensions to being even a village, there is to-day a thriving, busy, growing, trading and manufacturing center, with

A Large Well-Kept Hotel,
The Bank of North Wilkesboro, \$40,000 Capital,
A large Livery and Sale Stable,
Two Large Wholesale Stores,
One Hardware Store,
One Furniture Store,
Ten General Merchandise Stores,
Three Saw Mills, Sash and Blind Factories,
One Foundry and Machine Shop,
A Handsome, Well-Edited, Home Print Newspaper, The North Wilkesboro News,
One School,
Two Churches Under Way,

Two Brick Yards in operation, and a number of other enterprises practically secured.

Arrangements are about completed for a Woolen Mill.

A large iron front brick block, containing Bank Building, two Store Rooms, Opera House, and Printing Office; A graded School Building and an Iron Bridge across the Yadkin River, in the Eastern part of town, will be completed during the spring and summer.

Turnpike roads to Tennessee and Virginia are about completed; county roads leading into town are being improved and numerous good new ones built, with the intention of making this the center for all the wagon trade of this section.

A tobacco warehouse for the sale of the high grade leaf of this district will be built during the summer, so as to give a home market for the tobacco crop that will be grown this year.

Compare this record with that of any other new tow you have heard of during the past dull season.

NORTH WILKESBORO,

Is 75 miles west of Winston-Salem, at the present terminus of the Northwestern North Carolina Railroad, which when ultimately completed to Bristol, Tenn., will give the shortest route between Norfolk and Cincinnati. North Wilkesboro is the most important trading point between Winston-Salem and Bristol, and is in the center of the great undeveloped mineral and timber district of Northwestern North Carolina, being by United States Postal Map on an air line 75 miles southeast of Bristol, 45 miles east of Cranberry, N. C., 40 miles north of Statesville, 45 miles northeast of Hickory, 90 miles northeast of Asheville, 45 miles southeast of Mt. Airy, and 80 miles south of the Norfolk & Western Railroad, in the valley of the Yadkin, between the Brushy Mountains on the South and the Blue Ridge on the North. Climate, healthfulness, water, drainage and location unsurpassed by any town in North Carolina.

The townsite consists of 1,088 acres, located, by the way on a farm originally owned by General John B. Gordon's grandfather. The first public auction sale of lots was held December 2, 1891, and 188 lots were sold. Purchasers have in many cases been able to resell at a handsome profit. The company has sold 50 lots at private sale since then, on many of which houses are now being erected. It is a significant fact that among the business buildings erected a large per cent. are substantial brick structures, while for architectural beauty and cost many of the residences are much superior to those usually found in a town so young.

At the second auction sale, May 11th, 1892, 35 business lots and 44 residence lots sold for \$16,490, an average of \$8.35 per front foot, which is \$2.53 per front foot (or 44 per cent.) more than the average at the sale last December, which was the best sale made in North Carolina during last year. Since the sale, a contract has been closed for the location of another large saw mill, planing mill, sash, door and blind factory combined, which will do a large shipping business. A contract is closed for the location of extract works with a capital stock of \$300,000. The plant will cost \$125,000 and will cover six acres of land. Twelve families from the North will move down. The company will erect a large electric-light plant in connection with the extract works. North Wilkesboro will get there and will not be long doing so.

Through the townsite runs a stratum of serpentine stone, 200 feet in width, and also a bed of iron ore equal in quality to that of Cranberry. The Town Company also owns 4,100 acres of mineral, granite and timber lands in Wilkes County. It is probable that the work of developing the great mineral and timber interests of the section will be commenced in a short time, and on an extensive scale.

Sites will be donated and stock subscribed to such manufacturing enterprises as may be advantageously located here.

The policy of the Company is a most liberal one in this respect, it being determined to aid all legitimate enterprises to any reasonable extent. There are 328 miles of water courses within the borders of Wilkes County, furnishing to the vicinity of North Wilkesboro a water power as great as Fall River. The climate, while not moist, is neither harsh nor dry, and is especially suitable to the spinning of fine cotton yarns, such as cannot be made in the extreme South or North. There is also a fine opportunity here for bleacheries, to the establishment of which at Southern points there is a tendency at present. As they can't go where sluggish streams, impregnated with vegetable matter, abound, the quick flowing streams of clear mountain water, so numerous about North Wilkesboro, afford everything desired. Numerous other industries will do well at North Wilkesboro, and will be most substantially encouraged to locate there.

Capitalists, Home Seekers, Health Seekers, Manufacturers of wood and iron, and many other industrial workers may well investigate North Wilkesboro's advantages.

The above-described townsite and other property belongs to the Winston Land & Improvement Co., which was chartered by act of Legislature, session of 1887; ratified March 4, 1887, chapter 82. Authorized capital \$1,000,000. Present capital stock \$125,000, all subscribed and paid up.

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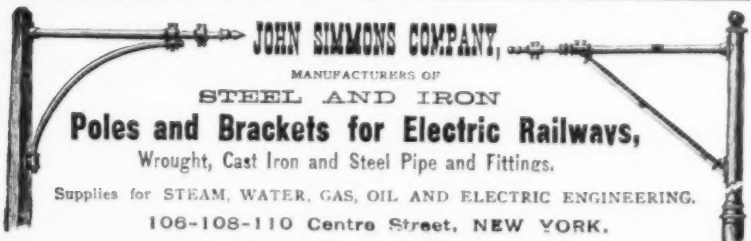
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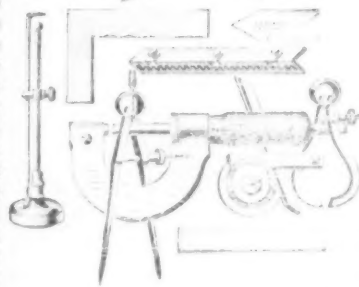
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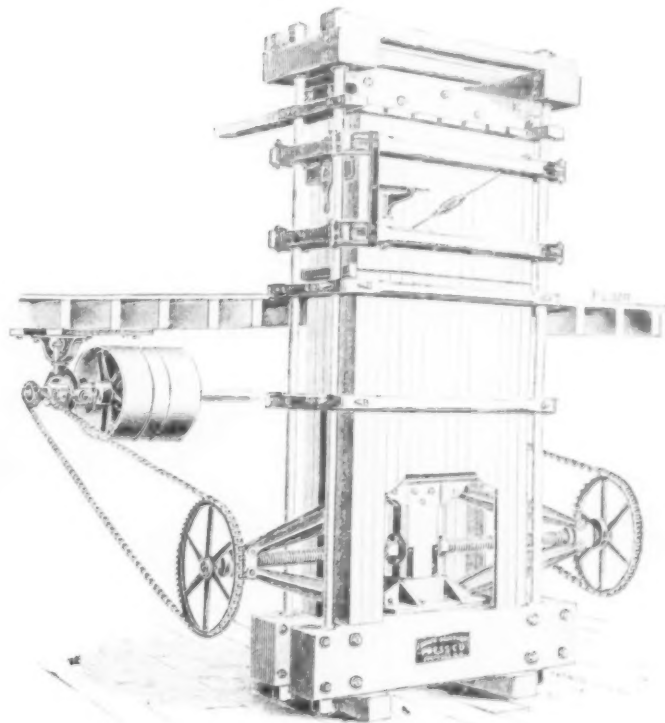
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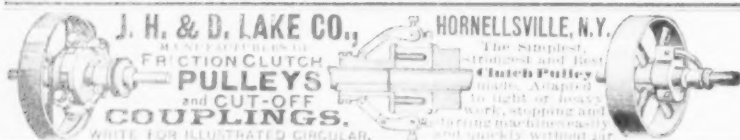
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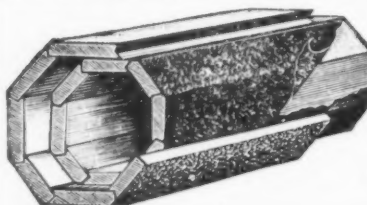
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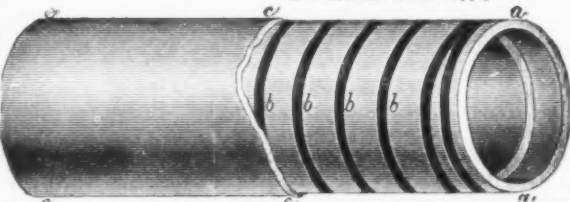
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